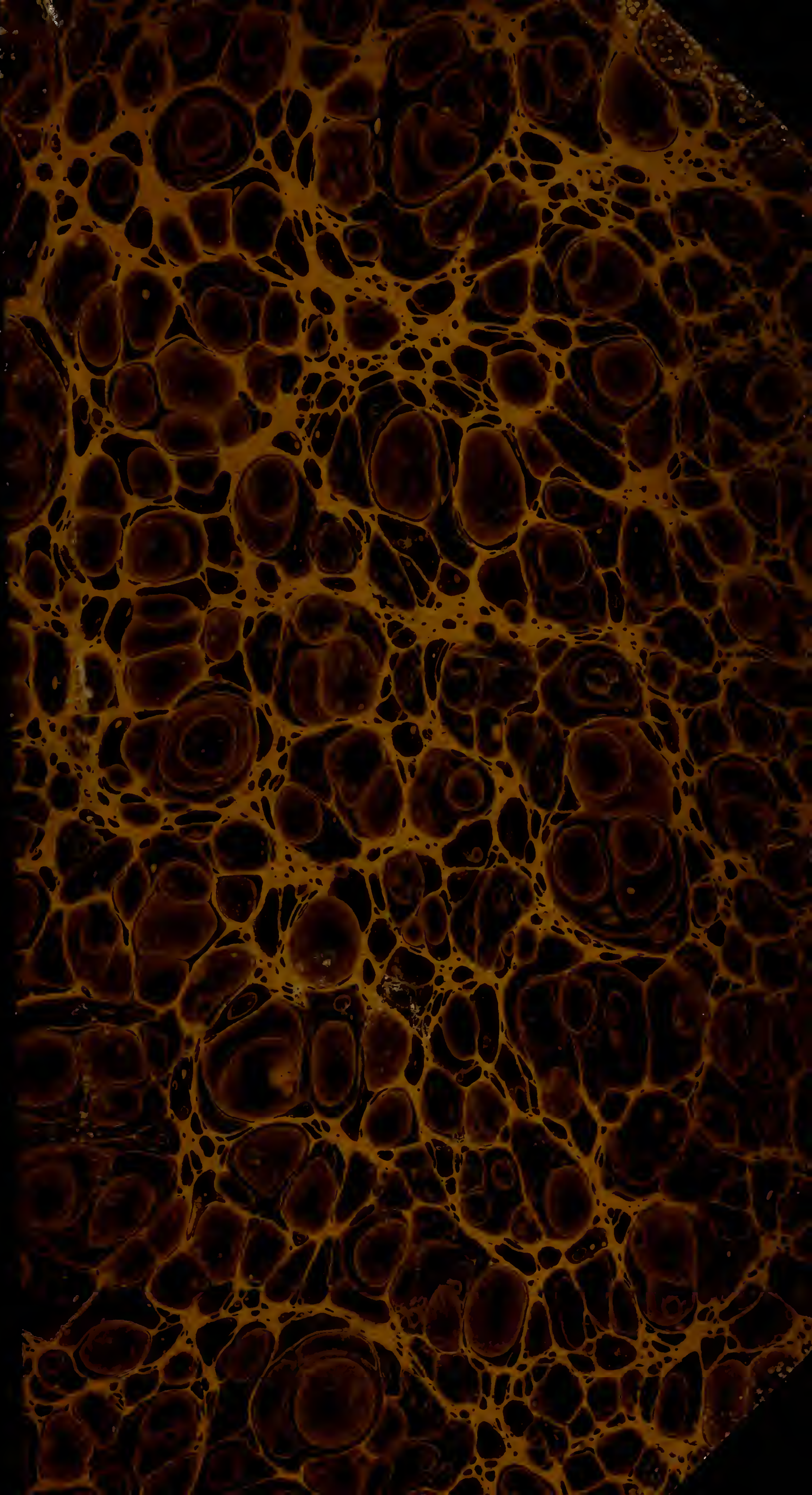

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ORIGINAL CONTRIBUTIONS.

RESECTION OF THE SCAPULAR EXTREMITY OF THE HUMERUS.

BY PROF. HOWE.

The arm is so useful and important a member of the body, and so utterly impracticable is it to produce an artificial substitute, that its partial or entire removal becomes a subject of serious contemplation. To remove the arm at any point is not a difficult nor a tedious surgical operation, nor is it one attended with extreme hazard to the life of the patient. After the invention of the use of the ligature to arrest hemorrhage from the large arteries the amputating operation became comparatively safe, and on that account probably it has been resorted to in cases that now would be treated differently and with a rational hope of preserving the limbs.

The ancient surgeons evidently understood an operation for the removal of necrosis affecting the articular extremities of bones (*exsectio articularum*,) and the unconsolidated ends of such fractured bones as formed false and irregular joints. But their plan of operating was lost to us in the general wreck of classical literature. With them probably the operation was one of necessity as they knew of no efficient hæmostatic agents that could be used after an amputation.

The operation for opening the soft tissues and removing offending portions of the hard structures is commonly called *resection.* The term like "exsection," is derived from words that mean "to cut off, or away." In modern times it was first preformed by Mr. Filkin, of Northwich, of England, and in 1762. The operation was upon the knee joint, and proved perfectly successful, though no account of it was published until after the surgeon's death. Consequently no rules were established by the operator to serve as guides for his successors. Six years afterwards Mr. Charles White, of Manchester, following the *suggestive* operation of Mr. Filkin, resected the head of the humerus for destructive disease of the articulation, after cutting down upon and disarticulating it. And so successful was the operation that in four months afterwards the patient, to the surprise of the surgeon, not only recovered from the disease and the effects of the operation, but regained to a great extent the movement of the shoulder joint.

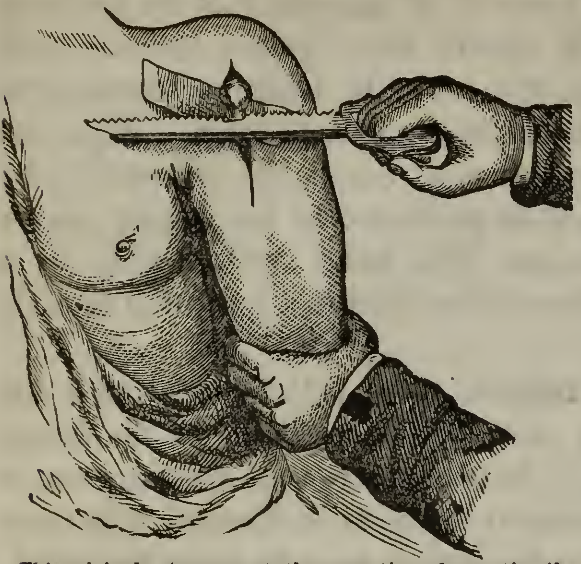
Soon afterwards, encouraged by the success attendent upon the previous operations, Messrs. Wainman and Park performed operations upon the elbow and knee-joints of the same character, and established its applicability to other articulations. In rapid succession other attempts were made to remedy diseased joints, and so fortunate were the results of a majority of the cases that resection was recognized as a legitimate branch of Surgery.

Resection is conservative in its character, and has in view, not only the avoidance of amputation, but the future utility of the limb operated upon. The older surgeons were in the habit of amputating after severe injuries of a limb, especially was such the case if the bone happened to be fractured in or near a joint- Also for compound dislocations, and for all suppurating diseases of the bones, and the articulations. Resection for the removal of carious or necrosed bone from the shaft of the long bones is generally a simple operation, and unattended with any considerable danger, but the resection of joints is a more serious matter. Performed upon the joints of the upper extremities the results are very flattering, for motion is restored or secured to the articulation. The elbow for instance, after excision of the articulating extremities of the radius, the ulna and the condyles of the humerus, generally has preserved to it mobility which is of so much importance in this articulation. In the lower extremities the operation is perhaps as successful as in the upper, yet its objects are not the same. In the knee after resection ankylosis is desired, for any mobility would be of such an unreliable character as to impede locomotion more than a stiff knee.

In resections of the joints the cartilages if left on either articular surface, would tend to obviate ankylosis, hence, if possible, they should be preserved on one of the bones implicated in an operation upon the upper extremities. But in the lower it is essential that the articular cartilages be excised in order to secure firm osseous union. And this result must be facilitated in the lower by bringing together the freshly cut bones, and securing them steadily in apposition. When the cartilages are lost in the articulations of the upper extremities, by ulceration, or injury ankylosis is to be prevented by keeping up passive motion during the reparative process. The union will then be by a tough fibrous tissue, such as is found when fractured bones fail to unite by osseous deposits.

To perform the operation of resection more patience and skill are required than in an amputation; and the responsibility of the former is greater than that of the latter. It takes more time for the parts to heal, and the constitutional treatment needs to be directed with more discretion. In a case of resection the patient must be under the watchful care of the surgeon during the healing process. An inexperienced person should not be put in charge of the case. Improper dressings, collections of purulent fluids, and errors in medication or diet might cause irreparable injuries. No operations in surgery need more skilful after-treatment than those of resection.

Resection of the Shoulder-joint.—The indications for resection of the upper extremity of the humerus are as follows. It is to be performed in bad cases of comminuted fractures complicated with wounds of the soft tissues extending into the articulation, as injuries resulting from violence of a crushing and penetrating character, gun-shot wounds caries, necrosis, morbid osseous growths, and for other incurable affections of the articulation. By any of these the joint is rendered not merely useless, but the patient's health is destroyed and his life endangered by the constitutional disturbance that is excited. The contra-indications to the operation are an extremely depressed condition of the vital powers, such as would render any operation unwarrantable; excesssive destruction of the soft parts, involving the axillary nerves and vessels; and caries and necrosis extending far below the articulation. The main objects of the operation are to avoid amputation, and preserve to the patient a strong, moveable limb, and such a one as would be more desirable than any artificial substitute. The instruments needed in an operation of this kind are, such as are ordinarily demanded for incising the soft tissues, and for arresting hemorrhage, and dressing wounds. And in addition to these a variety of saws and bone cutting implements are required. A common amputating saw will do for the head of the humerus, and the gouge forceps answer well in the removal of such parts of the scapula as may be deseased.



This original cut represents the operation of resecting the Shoulder-joint through a straight incision in the soft tissues.

The first incision should be made from the acromion downwards upon the arm four or five inches ; and it should be parallel with the bicipital groove of the humerus in order to free the tendon that lies in it. This incision is all that is made by Prof. Langenbeck, and it will answer when the tissues are not very tense from long continued diseased action. If only this incision be made the operator with the scalpel at once divides the tendinous connections of the tuberosities, and the capsular ligament, if they have not already been ulcerated away, being careful not to cut the tendon of the biceps muscle which passes through the capsule, and to this joint is analagous to the ligamentum teres of the hip. Having pushed the bicipital tendon inwards, he siezes the elbow, and using the arm as a lever, forces the head of the humerus out of its place. A piece of paste-board is now to be placed between the soft tissues and the bone, and the saw removes as much of the humerus as is desired. The glenoid cavity is next to be examined, as well as the acromial and coracoid processes. If they need removal the gouge-forceps may be used upon them until such parts are cut away as would if left retard the healing process. The humerus and the soft structures should then be replaced, and the edges of the wound brought together and retained with sutures, plasters, and other dressings. The most depending part of the wound should be left open to facilitate the escape of fluids. To subdue a too high grade of inflammation cold and anodynes should be kept constantly applied to the parts. And veratrum or aconite should be administered in doses sufficient to lessen excessive action of the heart and arteries. After two or three weeks have elapsed and the patient appears to be doing well, passive motion should be made in the joint to prevent ankylosis The warm water dressing may be substituted for the cold and anodyne one as soon as the conditions of the case will admit it. Generally the inflammation so far subsides in two weeks that the one ought to take the place of the other. The time required for the healing of the wound varies more than in other operations. It commonly takes from six weeks to as many months. If a longer time was required than six months it might be expected that some part of the diseased tissues still remained in the wound.

If after making the primitive straight incision as directed by Langenbeck, the head of the bone is found to be disconnected with the shaft, or the epiphysis of the bone is so nearly separated as to remain in connection with the glenoid cavity when the extremity of the shaft is made to protude from the wound ; or from any other cause more space is demanded, then another incision should be made from a point about two inches farther outwards than the commencement of the other, and be brought downwards and inwards until the two unite in an apex at their lowest points. A V-shaped incision is thus formed, which produces a flap that may be dissected up, giving beneath it plenty of room for operations upon the bones. A majority of surgical writers prefer this incision to the straight one and claim for it the advantage of its furnishing a freeer exit for fluid accumulations.

A resected limb is shortened by the operation, but in the arm it does not appear a serious deformity, nor does the shortening interfere much with the functions of the limb. If ankylosis is escaped the humerus becomes united to the scapula by means of a dense fibrous material which enters into unions by pseudarthrosis. The fingers, hand, and fore-arm will remain as useful as ever if the nerves going to these parts be not injured. In case of ankylosis at the point of operation, so free does the scapula move upon the thorax that the functions of the arm are by no means lost.

Cases of partial reproduction of the bones and cartilages after they have been resected are reported. Chaussier reports a case in which the glenoid cavity was filled with a conical shaped osseous mass against which the head of the humerus, having become slightly excavated, formed an articular union, and performed many of the functions of a joint.

From the injury done to the circumflex nerves and arteries while performing the operation of resection at the shoulder-joint the deltoid muscle becomes in time atrophied and paralyzed, yet it generally recovers its natural condition after it has been exercised for awhile.

The dangers attending this operation are by no means great. The greatest is from *pyœmia* or suppurative phlebitis, and this danger is not absent after any capital operation. When secondary abscesses are developed in the viscera, and deep tissues of the body from a pyæmic condition the issue is about sure to be fatal. After amputation at the shoulder about two-thirds of all the cases recover; after resection at the same joint a little more than that proportion are saved. In the late Crimean expedition more amputations were performed at the shoulder by the Anglo-French surgeons than resections at the same joint. But of the operations performed 15 per cent more of the resected cases recovered than of those submitted to amputation. Other campaigns show varying results, but none unfavorable to the operation of resection. In private practice enough cases are not reported to estimate correctly the merits of the operation, yet so far as can be ascertained it is an operation better adapted to private than military surgery. Considering then, the question of resection at the shoulder-joint in all its bearings; its comparative safety; the utility of the preserved arm; the difficulty of supplying any artificial substitute, and various other points not unfavorable to the operation, it is to be hoped that the arm will not be condemned to amputation without necessity decides against the conservative course. Resection can not always be substituted for amputation as the nature of the disease or injury will not admit it. Sometimes free incisions into the joint will allow fragments of bone and the *debris* of carious disease to escape, a course of treatment that saves the operation of amputation or resection.

CLASSIFICATION IN MATERIA MEDICA.

BY PROF. CLEAVELAND.

In all departments of Science, those who have studied or taught have felt the need, and perceived the advantages of a proper and orderly arrangement and classification. Indeed only by means of order and arrangement, can any *Science* be said to exist, for Science may be defined, truth brought to our knowledge, and reduced to order; or, according to Prof. Allen; "the sharp attrition of refined experiment may shape and polish the unhewn blocks; the line and level of Truth fix their exact *relative* position, but the plastic hand of *Order* must adjust the combined proportions before the admiring architect can say, 'tis finished."

Not only must the various articles of our Materia Medica, be placed in order, be *classified* in accordance with the true nature, character and powers of each individual agent and its relationship to others; but each Group, Class, Order, or Division must be so named, that the name shall be descriptive of the Group, Class, Order, or Division to which it is applied, *and of none other.*

Words *mean* something; and they should always be used so that they shall convey their own meaning, and not be liable to convey a false or erroneous impression to the minds of the hearers or readers. It is only by Classification of the facts of any science and the proper use of words to form the Nomenclature of that science, that it can make progress towards perfection. It is true that with many, the labor of forming a proper classification in any science is extremely distasteful, and is irksome to all; but a Linnæus, a Jusseau, a Cuvier, a Lindley an Agasziz, and other devout votaries of their chosen science, have seen the great hindrance to truth from an erroneous Classification and Nomenclature, and the advancement which must accrue from the true, and they have with an iron will and strong determination swept away the error and confusion which they met with; and with earnest labor, in its place they have constructed the new in such a way that each new truth as it was brought to light would find its proper place in the orderly arrangement.

But in Materia Medica, as well as in the other branches of Medical Science so little progress has been made towards bringing *exact truths* to our knowledge, and words have been used in such a vague and indefinite manner to express that which is known, that although nearly every writer on Materia Medica or Therapeutics has given a new classification, yet all others, and usually the author himself, has been dissatisfied with the results obtained.

Language is not susceptible of mathematical precision at all times, yet it might more precisely convey our idea than it usually does, and for the purposes of science it should have all the precision it is susceptible of. No verbal falsehoods can be allowed in science any more than false coin in the currency of the realm, and he who gives the stamp of his own usage and encourages in others the circulation of verbal falsehoods, should be held as strictly accountable at the bar of scientific justice and truth, as he who utters base or false coin is by the law of the land. The truths of science should be expressed in brief, direct, and unequivocal words and terms.

In the Preface to his Elements of Chemistry, Laviseur said; "While I thought myself employed only in forming a *Nomenclature*, and while I proposed to myself nothing more than to improve the language of chemistry, my work transformed itself by degrees, without my being able to prevent it, into a Treatise upon the Elements of Chemistry The impossibility of separating the *nomenclature* of science from the science itself, is owing to this—that every branch of physical science must consist of three things—the series of facts which are the objects of the science—the ideas which represent the facts—and the words by which these ideas are expressed. Like the impressions of the same seal, the word ought to produce the idea, and the idea be the picture of the fact. And as ideas are presented and communicated by means of words, it follows of necessity, that we can not improve the language of any science, without at the same time improving the science itself; neither can we improve a science without improving the language or nomenclature which belongs to it."

The science of Medicine is an *ancient* one, and is deserving our veneration on account of its antiquity, but as anything which tends to render any science *stationary* must prove prejudicial, all classifications and momenclatures, however antiquated, must be removed, if their retention tends to perpetuate error, or hinder the progress of truth. The nomenclature adopted should be always plain and definite, never allowing any doubt or uncertainty; and in its construction should accord with the usage of scientific writers in other departments of the natural science.

The classifications and nomenclatures of the writers and teachers of Materia Medica, and Therapeutics, have been based either on the part of the articles used, as the roots, leaves, and barks of plants; the proximate principles used; the natural Kingdom in which the agent originated, as mineral, vegetable, or animal; the part of the system on which the remedy acts, as nervines, hepatics, &c. or from the effects which the medicine produces. These several classifications have each produced their impressions upon medical literature, and each writer has taken pleasure in introducing new and favorite *terms* in accordance with the opinions he entertained and the classification he introduced, the result is that our works are filled with terms more or less vague, indefinite, and erronious, obtained from a variety of sources, until frequently there are from half a dozen to a dozen words in use by our authors to express the same idea. But besides the fact that there is such a redundancy of technical terms, they seldom convey the one idea they are used to represent. We find difficulty in learning these various names which have been applied to the single idea; but when to that difficulty is added the fact that these various words, although used as synonymous, very seldom are from the same language and still more seldom mean the same thing, the difficulty is rendered still greater and the confusion worse confounded, until a constant reference to the Lexicons proves that often no two authors use the words with the same meaning, and even in different parts of the work authors often use the same words with different significations, as well as a variety of words to convey the same idea, thus rendering it very difficult at times, if not impossible to determine the exact idea intended to be conveyed.

Take the word *Iron* as it is used in medicine, as a familiar example. It is proper to use *Chalybeate*, for that means *iron*, or steel. But what reason can there be in using also the words, *Ferruginous*, *Martial*, *Mars*, *Sideras*, *Fer*, *Ferrum*, *Metallum*, *hœmatoporticum*, *Martis*, and other terms as applied to the metal, or the more than *four hundred* different terms that are applied to its various preparations in use? It may be well for the scholar to know, if he can know, what idea writers have meant to convey by the use of these various terms, but he should adopt those only which *tell the truth* in science, and which he can make use of in accordance with the usage of scientific men in other departments of knowledge. That the very great evil which obtains in the Nomenclature and Classification of our Materia Medica, can be removed immediately I do not flatter myself. But that much needs to be done before the truths of the science can take the form of orderly arrangement none can doubt; and that *something* may be done to bring order and simplicity out of this disorder, and complexity I fully believe, and in a future paper I propose to present some hints which I expect will elicit the friendly criticism of the readers of the College Journal, and thus at least aid in accomplishing the desired change.

"SPASMS."

BY S. C. SOUTHWORTH, M. D.

Birney Fabrick was born the 19th of Sept. 1850, of healthy parents, the mother having previously borne seven children. The child was precocious or forward. At the age of four years he was supposed to be afflicted with *worms*, and took vermifuge without removing the symptoms.

A physician was called who gave no reason for the symptoms but ordered a continued use of Stramonium. The disturbance of health, formerly supposed to be caused by worms, occurred every few weeks, but with no definite intervals of time, except that some of the last attacks were just one month apart.

The child knows that he is to have the attacks only one or two minutes before they occur. They commence with a choking sensation, with smacking of the lips and quick severe throbbing of the heart and quick pulse, and a slight *cringe* or forward motion of the shoulders, with a peculiar movement of the mouth and chin, and a falling of the head.

The boy remains insensible for from thirty to sixty seconds; when the choking passes off, the eyes are raised, and the sensibility returns and the feeling of langour and fluttering of the heart gradually abates.

These spasms generally appear in the morning and may return two, or three, or four times within an hour, and then there will be none for some hours, but when he has from eight to fifteen in the course of the day usually they disappear in the evening, and in two instances there were two spasms the next day.

He complains of no pains. His activity soon returns, and he plays with glee between the attacks. His appetite is unaffected. He has had no other sickness except one attack of the fever and ague in the summer of 1855.

I have given him the Apocynum canabinum and other physic enough to move the bowels, and on the appearance of the spasms the tincture of Veratrum viride fifteen drops, increasing five drops every three hours; but at the two last doses the friends gave a tea spoonful without any apparent effect. I also gave him:

℞. Tinct. Guaiac. fʒ j,
“ Macrotris. fʒ ij M.

Dose fifteen drops four times a day.

On the appearance of the spasms I ordered:

℞. Tinct. of Opium,
“ Lobelia,
“ Sanguinaria āā fʒ ss.

Dose a tea spoonful every two hours.

This produced no effect, and on the third attack I gave:

℞. Quiniæ Sulph.
Ferri cyanureti āā grs. vi,.

every four hours, for one week before the expected appearance of the spasms.

On the spasms returning I gave an emetic of the infusion of Eupatorium perfoliatum, lobelia and sanguinaria; but on their reappearance after vomiting I gave the tincture of Gelseminum in tea spoonful doses which had the effect of producing perfect muscular relaxation, yet on the system passing from its influence, the spasm returned, and I declined further treatment.

TYPHOUS FEVER.

BY T. G. HORTON.

Having the experience of several years practice in this disease and with small comparative fatality, I present the following ideas as to the cause, and the course of treatment to be followed for the cure of this disease:

However diversified the symptoms of the different cases, I think they all originated from the same *proximate cause*, and that an atmospheric one, or one within the atmosphere, but of animal origin.

The different symptoms I have observed, have, as I conceive, been owing to the peculiarities of those attacked. In some, the fever has been ushered in with a chilliness, and delirium followed almost immediately. In others, the approach of the disease has been more insidious, with a sense of formication along the spine, etc. In others still, the alimentary canal is very susceptive to the action of irritants, and looseness may be present, or these may exist from the first.

But this fever is readily diagnosed by the tongue being red at the tip and edges, or being red over its entire surface, as well as the peculiar tremulousness on protrusion, and the extreme muscular prostration. I have not seen the eruption of the surface which is sometimes present in Typhoid fever.

In the *treatment* of this fever, there is generally too much medicine given, and I in a great measure *discard* that usually adopted, and give such medicines as the peculiar indications of each case appears to demand. As the disease, if left to its course is seldom fatal, and by leaving the system unembarrassed by medicines, I have never had the fever assume those obstinate and unyielding conditions that others meet with. The hemorrhage from the bowels that others have mentioned, I think is due to the medicine given.

As I have found there were indications of the presence of malaria, I have given the combinations of Quinia and Iron so highly recommended in Jones' Practice. I have also used Aconite and Veratrum viride, and in the latter stages Ammonia and even Capsicum, when a permanent stimulant was needed. When the diarrhœa demanded astringents I have used Tannic Acid, Matico and Sweet fern, and as a last resort, Nitrate of Silver in pills. I keep the surface sponged with potassa and soda water, and with this treatment, I have thought myself master of the disease.

But I have found some cases that would not succumb, and I too resorted to the use of stimulants in large and repeated doses. I found that extreme prostration was present in patients of low vitality or those exposed to a more concentrated miasm.

These cases must be aided quickly or they will prove fatal, and in order to produce the greatest beneficial action of my treatment in the shortest space of time, I have used stimulating agents to act powerfully to increase the perspiration, and for that purpose prefer the *hot air bath*, made by enveloping the patient and a chair in which he sits with a blanket, and heating the enclosed atmosphere by burning alcohol underneath the chair. I order the bath repeated once or twice a day, and while the patient is taking it the perspiration is favored by the use of proper drinks.

I give these baths at the onset of the disease, and the agents already spoken of, as I think they are needed. I also give nutrition as the system demands, and in the latter stages, porter ale, etc. I do not have much fear of the bowels becoming too loose, but if they are I give astringents combined with aromatics. If they are required as shielders, I give mucilages, and I find them often useful, when alcoholic preparations have been used.

NEURALGIA, SEU IRRITATIO SPINALIS.

BY LEWIS E. MILLER, M. D.

Under this name, the profession have committed many medical sins. The ignorant practitioner is ready to call every pain in the back, *spinal irritation* without any investigation as to the real cause, not knowing that as a special disease. Neuralgia of the spine is of rare occurrence. Indeed, Eisenmann in the *Med. Chir. Journal.* Romberg in his Treatise on Nervous Diseases, and Dr. A. Meyer of Atzei assert that it *never* appears as a special disease, but that it is a word used only to express a general pathological idea, and thus an irritated condition of the spinal marrow is the foundation of a numberless multitude of diseases, and that Neuralgia is an idiopathic, a symptomatic, sympathetic, or a reflective, disease.

Dr. Meyer published in 1849 an extensive paper, in which he showed how at first, the symptoms of a sensitiveness of the spinal column have been called by this name—and when the physiology of the names were better understood it was queried whether the spinal pain was a *central* or *peripheral* Neuralgia. The followers of Bell took the position of the centric origin of spinal neuralgia, and then the term obtained its general signification, while some have maintained that there exists at times a spinal irritation without sensitiveness of the vertebral column, and this has led others to pronounce almost all chronic diseases, spinal irritation, and to determine a disease of the stomach or lungs by pressure on the back!

The supporters of the idea that spinal irritation is a centric affection, explain it with Stilling as a stagnation of the nervous force, or with Marshall and Hirsch, as a dynamic condition differing from any form of congestion. The latter view led its supporters to say that all diseases where structural change in the organ did not exist, were owing to spinal irritation. The result is, (and which produces perplexity and confusion,) that the same name is apt to be applied by different authors to entirely different forms of disease.

If any suppose it to be purely dynamic disease, they will say, as no effect can exist without a cause, that this material disease must have a material cause. But other views of spinal irritation are not of such a character that we need to assume some special disease.

As a name for a disease of the spinal marrow, the term is both too extensive and too limited, for neuralgia can exist without disease of the spinal marrow, and disease of the spinal marrow can exist without neuralgia, or both exist independent of each other. If it is supposed to be an Inflammation, or a Neuralgia dorsalis-intercostalis, or a Neuralgia medullæ-spinalis, or a Congestion, the name "Spinal Irritation" is entirely useless, for the former terms will be truthful and a great deal better. This in short is the reason why Dr. Meyer came to the conclusion that the term "Spinal Irritation" should not be used in medical literature.

But the investigation of this matter has directed the attention of the profession to the pathology and physiology of the spinal marrow, and of the value of irritation of the spine as a symptom of disease.

It has been proved that spinal irritation is a *cause* of different diseases, but the *source* of that irritation must be looked for in other organs still, for the irritability of the spine is the result of action and calls forth re-action, as an echo is the *re-action* of a distant sound striking upon a surface which gives forth the echo. Hence, pain in the abdomen, debility of the limbs, spasmodic bronchial affections, gastric diseases, phthisis, or affections of the lungs simulating phthisis, epilepsy, etc., are often the results of spinal irritation.

If the vertebral column is examined, it will be found that either in the cervical, thoracic, or lumbar region, there will be tenderness on pressure upon the space between the ribs.

The intermittent Typhous fever is characterised by spinal irritation, which also extends to the brain, and may be recognized there as a softening of the brain.

The sensibility of different parts of the vertebræ greatly varies. It is often only manifest to very strong pressure, but it is sometimes so great as to produce an outcry and a painful drawing in of the spine, and in some cases it will be so acute as to be perceptible without pressure. Generally, however, the patient does not know that there is a tender spot in the spine. The pain may be temporary, or constant. If the pain is temporary, it will be likely to return again ere long, and it may change its locality, passing from the cervix to the dorsum, or from the dorsum to the cervix. The return of the pain occurs often with menstruation, or the gravid condition of the uterus, or under the influence of unpleasant emotions. Sometimes there may be two tender places at the same time, between which the space may be free from tenderness. In the great majority of cases, the tenderness is more or less near the spinal origin of the nerves that are distributed to the organs diseased. Many more women than men suffer from spinal irritation.

There are two distinct species of the disease. The primary spinal irritation, (*Irritatio Spinalis prima*, *seu protopathia*,) seems to be an independant affection of the spinal marrow or its sheath, and the *symptoms* may appear in the form of different diseases. The spinal irritation is here a *cause* and the consequent disease a *symptom*. The secondary spinal irritation, (*Irritatio spinalis secundaria*) is caused by several acute and chronic diseases, particularly such diseases as have lasted some time. It is a *symptom*, probably often produced by a thickening of the covering of the nerve and a consequent pressure of it, or a thickening of the coverings and pressure on the spinal marrow. In this latter case the disease elsewhere is the *cause*, and the spinal irritation is the consequence.

This secondary spinal irritation often exists where there is disease of the lungs, intermittents, or disturbance of the menstruation, and is manifested by tenderness in the dorsal region; in chronic affections of the uterus, by tenderness of the lumbar regions; and in *Tic douleureux* by tenderness about the seventh cervical vertebra.

Rheumatism seems to be a very common cause of the *primary* form of spinal irritation, but it is a disease less frequently met with than the secondary forms.

The *diagnosis* depends upon the evident sensibility of one or several spinal bones upon pressure. A sponge dipped in hot water and then applied to the spine, gives but doubtful results, although it is recommended by Copeland, who advises to pass a sponge dipped in hot water down the spine. The result is doubtful and uncertain, because the heat of the sponge often causes no uneasiness where pressure causes considerable pain.

The best way to learn the tenderness of the spine is to press each bone of the spinal column, one by one, with the thumb of the right hand, or on each side of the spine between the bones, pressing directly forward, while the left hand is placed upon the shoulder to keep the patient fixed.

Spinal irritation can be counfounded with several other diseases of the vertebral column, as caries, chronic inflammation of the bones, ligaments, etc. Spinal irritation, which is simply erethism of the marrow, and chronic or acute inflammation of the spinal marrow and its coverings, are entirely different diseases, and while they are somewhat alike, they differ much in degree.

The diseases which owe their origin to spinal irritation, are hysteria, chorea, neuralgia, affections of the chest, asthma, dyspepsia, convulsive whooping cough, (the older physicians were accustomed in persistent cases of this disease to place a plaster between the shoulder-blades,) palpitation of the heart, and fixed pain in the fundus of the uterus during pregnancy.

Secondary spinal irritation may be caused by hydrothorax, pulmonary tuberculosis, prosopalgia, chronic diseases of the uterus, chronic affections of the liver, anomalous menstruation, and intermittent fever.

Treatment. This consists in investigating and removing the existing causes; and in this investigation, it is necessary, first of all to observe the peculiar locality of the tender spot of the spine. In the treatment of *primary* spinal irritation issues and vesicatories are useful, but sinapisms are not applicable. In the treatment of the *second* form of the disease, we must not neglect to notice the *cause* of the affection. In this also, issues near by or upon the tender point are very desirable remedies.

Inunctions of iodine are of use only in the syphilitic diathesis. Cold ablutions and the shower bath may be applied to the spine, but are useful only in the commencement of the treatment, while warm baths are often beneficial. Sulphate of Quinia has been very highly recommended. Opium and Morphia have been beneficial in some cases. Drastic purgatives have been lauded by English authors, and must never be forgotten where the alimentary derangement is the primary cause. Valerian, Castor, and Iron will be of service where the difficulty is a pure Neurosis, or accompanied by Chlorosis or Anæmia.

An ointment for spinal irritation may be made as follows:

R. Ext. of Belladonna, ʒj,
Acet. of Morphia, grs. viii,
Liniment of Soap and
Camphor, f℥ ij, M.

With which rub the spine daily.

The horizontal position, purgatives of Croton oil to the extent of a drop each week, combined with the preparations of Iron, are the main curative means, aided with inunctions of Croton oil upon the sensitive spot in the spine.

Arsenic and Strychnia have been recommended, but I reject them as they are too dangerous to be employed as remedial agents. I have seen *tetanus* produced by one-twelfth of a grain of strychnia and in its stead I use the Extract of Nux Vomica, and I am of the opinion that both Arsenic and Strychnia should be banished from our Materia Medica.

Nitrate of Silver, and the Muriate of Gold are sometimes useful. In convulsive irritation the Ammoniated Copper has proved curative. When the irritation originates in the dorsal vertebra, I give Phelandrium aquaticum, or Polygala senega in decoction. After the retrocession of the eruptive fevers I find the leaves of the Rhus radicans of excellent service. If the cause is a disturbance of the lochial discharge give Camphor; and if caused by suppression of menstruation, Sabina.

As regards *diet*, that must be in every respect free from any exciting admixture. The patient should take passive bodily exercise, have country air, and the solvent mineral waters, and should take care that any torpidity of the alimentary track be prevented.

OBSERVATIONS ON THE EXTERNAL USE OF POTASSIUM CYANURETUM.

BY ABRM LIVIZEY, M. D.

I am aware that there is considerable prejudice against the use of mineral agents employed as medicines; and considering the amount of evil that has been done by their indiscriminate use, the prejudice on the whole is a sanatory one. Yet I conceive it would be absolute folly to reject medicinal agents from the mineral kingdom, for external use, especially when they have proven time and again to be beneficial, and that too *after* the use of the variaus fomentations, cataplasms and other medicinal compounds recommended, have failed to fulfil our expectations.

A solution of the cyanide of potassium is such a medicine, possessing the most marked and salutary antiphlogistic and sedative properties, and in my experience superior to any other in the Materia Medica for such purposes as an external application.

A solution of two to four drachms to the pint of water, according to the severity of the pain or the acuteness of the inflammatory disease, applied by means of saturated muslin cloths of several thicknessess, with a dry napkin over them, is a superior application in cases of acute irritation or inflammation, characterized by pain, heat of skin, tenderness upon pressure, etc.

Hence in all inflammatory diseases of the head, chest, or abdomen, this application should not be overlooked, and in cases of convulsions among children, or brain fever of adults; of catarrhal affections in the former, or pulmonic diseases of the latter; dysentery, pertonitis, etc.

Here is one of many cases in point.—Mrs. P. aged 60, a robust, plethoric woman of excellent constitution, (when attacked,) while doing some work in a garden, on a hot summer's day, became suddenly blinded and insensible, with great and persistent heat of head, full pulse etc. Her son and nephew, both being physicians, and in the vicinity at the time of the accident, attended her for a long period, and resorted to all the usual depletory measures, such as venesections, repeated purgatives, nauseants, diaphoreties, sedatives of various kinds, veratria ointment, and veratria snuff, etc., etc., week after week, and all without availing aught except reducing the patient, destroying the appetite, and impairing her digestive organs, enfeebling the system generally, and keeping her in a recumbent state.

Tired out at last, and having emptied their *quivers*, and no more expedients presenting themselves; and desirous of leaving the neighborhood, (and the case, perhaps,) I was requested to continue the case.

After a rigid examination of all the organs of the body, I could not discover anything to be corrected specially, but the *heat of head*, the surface of which was red, hot and shining; and any attempt at rising was attended with extreme *nausea*, dizziness etc, whenever she attempted to sit up in bed.

I cupped her once, twice, thrice, on temples, nape of neck and behind the ears, had cold cloths continued to her head, with little or no apparent benefit. I then gave her hydrocyanic acid which allayed, in a measure, the nausea, and judging from the advantage gained by this agent through its influence upon the gastric nerves, or pueumo-gastric, that a greater influence might be obtained over the cerebral functions by a similar medicine applied locally, I made a strong solution of cyanide of potassium (ʒ iv, to water Oj,) and had it applied to the head in lieu of simple cold water. It had a prompt effect in quieting the cerebral functions, and the stomach sympathising with the brain, became also quiet, and a continuance of this external application with mild tonics, after a few days, soon enabled the patient to resume her household duties, and many were the thanks received from her, and much practice received from her friends and relatives, were the gratifying results to me.

SYPHILIS—ITS ORIGIN.

BY A. B. JACKSON, M. D.

The unbounded licentiousness of the early nations of the earth has been a subject of historical notoriety. The cotemporary writers of every age have given evidence of the extravagant and illicit sexual intercourse indulged in by the people. The Bible contains such testimony; the Talmud has such a record; the Koran is filled with it; the early Arabian writers did not fail to make mention of it; Herodotus, the most faithful of ancient writers, depicts the shameful wantonness of the Egyptians; their immortal literature gives the best evidence of their base immorality; the disinterred relicts of Ninevah and Pompeii corroborate the evidence; the Greek and Roman writers generally, have spared not the vices of their countrymen, and unbridled sexual indulgence is portrayed as the most prominent of them.

As a natural penalty for such excesses sexual maladies might reasonably be expected. No special Providence need be invoked to account for the origin and spread of venereal or other malady that is consequent upon violated physical laws.

The virus of putrefying animal bodies when introduced into the circulation of a healthy animal produces symptoms of poisoning, yet a certain state of putrefaction in the decomposing body must be reached before the poison is developed. Before or after that time the putrescent body does not possess toxicological properties. The animal too, receiving the poison, is more susceptible of its influence at one time than at another. Various conditions must be favorable to the result or no virus is elaborated, or poisonous effect produced.

It is supposed that *rabies canina* is developed occasionally *de novo*, under certain conditions favorable to its origin. A dog has been known to suffer from hydrophobia when it had never been bitten by an animal affected with the disease. The condensed exhalations arising from human beings crowded into a ship, prison, or hospital, will produce typhus symptoms in those subjected for much time to the influence of the poisonous effluvia. The disease once generated, is highly contagious. It may spread rapidly and then be subdued, and no remnant of it be left. In another part of the world under like circumstances the disease makes its appearance again. The causes operating in the production of the disease in the first instance, may reproduce it in another if the surrounding circumstances be favorable to its reproduction, though no connection exist between the two cases except the relative one of cause and effect.

From what is known of the history of a disease similar if not identical with syphilis at remote periods of time, and in circumscribed locations, it has been conjectured that this disease too, may have arisen in a number of instances *de novo;* and may arise again, when favoring circumstances are suitably combined. The common impression, however, is that syphilis was introduced into Europe from this country by the followers of Columbus; or was contracted at the siege of Naples, which occurred soon after the return of the discoverer of America.

It is possible, if not probable, that the companions of Columbus became contaminated in the West Indies with syphilitic disease, which may have prevailed there. The filthy and lecherous habits of the natives of these islands were certainly favorable to the origin and spread of venereal diseases. At Naples, too, the soldiers of Charles the VIII. of France, from the unbounded freedom with which they revelled in that voluptuous city, may have contracted maladies not essentially different from the sexual diseases of the present day.

Yet there is indubitable evidence that people of an earlier history were affected with diseases of the genital organs that must have been contracted by irregular lustful indulgences. The habits of the people were favorable to the origin and spread of such diseases, and well authenticated facts are at hand to prove it.

The inhabitants of Sodom and Gomorrah were guilty of practices calculated to engender sexual disorders. And the assertions of Oriental travellers whose veracity is unquestionable, show that in Arabia and other Eastern countries, the inhabitants too faithfully continue the immoral enormities of their progenitors; and that they contract a malignant disease from beasts which resembles syphilis—and one that may be communicated like it.

The genital organs of the human race being similar in structure and function, must inevitably have been subject to the same general diseases, not only in countries having intercourse with each other, but in isolated regions where the conditions were favorable to their origin and propagation. It is now pretty well established that a urethral inflammation caused by the local application of some powerful irritant like the liquor ammoniæ, is attended with the secretion of matter that possesses contagious and virulent properties, and is to all appearance identical with gonorrhœal pus. If gonorrhœa, hydrophobia typhus fever, and other maladies may have a *de novo* origin, what good reason is there why syphilis may not have an analogous one? and if it may thus arise once, why may it not an indefinite number of times?

Upon the settlement of this country venereal was observed to be prevalent among certain tribes of Canada, a region not so favorable to the origin of this disease as those more tropically located. The same disease is reported to have been found among the early inhabitants of Scotland and Norway. Among certain tribes of Africa with whom intercourse is strictly forbidden by neighboring clans, syphilitic affections have been noticed by explorers of those countries. According to accounts of the Fakirs, the inhabitants of India, must have had venereal disease long before it was known in Europe. Among the statute records of Queen Jane I. of the Sicilies, certain stew regulations are preserved which clearly indicate the existence of venereal diseases as early as 1347, the date of the edict. One decree had in view the means of checking the spread of contagious maladies that might be contracted in the brothels, and commands that a surgeon be appointed to examine the inmates once a week, "for fear the youth who have to do with them *catch their distempers.*"

About the commencement of the Christian era, Celsus wrote extensively upon medical subjects. He describes *ulcers* upon the genital organs, and lays down a plan of treatment for them. What might these ulcers have been? There is presumptive evidence that they were syphilitic, from the low state of morals existing in those times. Celsus was a cotemporary of Emperor Tiberius, the successor of Augustus in the patronage of Horace, Virgil, and Ovid, who have eulogized and satirized the virtues and disgraces of their patron and his subjects. They inform us that the Emperor disgraced himself with the most unnatural vices and enormous indulgences; and so far drained his aptitude for sensuality, that he proposed rewards for those who would invent new pleasures. Hippocrates, 450 years before Celsus, wrote upon medical subjects particularly, and spoke in language too clearly upon sexual diseases to be misunderstood. And it would require an absurd amount of incredulity not to credit the accounts of faithful ancient writers, just because their language was not particularly explicit upon the topic under consideration. There are those who endeavor to maintain a modern origin for venereal disease, and vindicate the early inhabitants of the world from the stain because the early writers did not make use of phrases that could be interpreted into the scientific language of the present day.

The Biblical evidence given by Moses, in Leviticus, concerning the "uncleanness" of men and women affected with "issues" sufficiently proves to the mind of the unprejudiced reader the nature of the disease referred to. The Hebrew term "ha-zab," meaning "the man with an issue," was rendered by the Septuagint as "*gonorrues*," or the man with a gonorrhœa, and the term occurs nine times in the chapter, making it quite certain that the Greek term well represented the meaning of the Hebrew in the minds of the seventy-two interpreters.

In the Psalms is to be found very strong proof that the inhabitants of David's time were afflicted with disease of a syphilitic character. In the XXXVIII. Psalm, David presents to the Lord his pitiful case, and expresses his condition in language calculated to convince every unbiased person that the disease referred to was substantially the same as is known at the present day as syphilis; and that it had passed into the secondary or constitutional form. The great Biblical commentator, Dr. Adam Clarke, in speaking of this Psalm, says, "Several conjectures have been made relative to the *occasion* on which this Psalm was composed; and the most likely is, that it was in reference to some severe affliction which David had after his illicit commerce with Bathsheba; but of what nature we are left to conjecture from the *third*, *fifth* and *seventh* verses." Dr. Clarke, in commenting upon individual passages, says: "I do not see that we can understand the word in any *figurative* or *metaphorical* way. That David describes a *natural disease* here cannot reasonably be doubted," and "it would be easy to show a disease of which what he here enumerates are the very general symptoms." Our commentator thus signifies his ideas of the nature of David's disease without using the word syphilis, yet the meaning of the language is not to be mistaken. The medical man, however, can best judge of David's disease from the *rational* signs he has so vividly depicted. The pain he felt in his bones; the unsound state of his flesh; the loathsome character of his affection, connected as it was with his loins; the peculiar burning, feverish, "nekeleh" condition of his body, taken in conjunction with a loss of strength, impaired vision and great depression of the mind, clearly indicate that the Psalmist's malady was what would be termed constitutional syphilis at the present time. The fact too, that he had within a year been indulging in illicit intercourse with Queen Bathsheba, a woman of questionable virtue, renders the case more intelligible.

The object of this article is to show that venereal disease may arise *de novo*, and that its history dates anterior to the discovery of America by Columbus, or to the siege of Naples. Much more extensive evidence might be cited, yet for the present the above is deemed sufficient.

FUNCTIONS OF THE LIVER.

BY PROF. ST. JOHN.

The Liver, the largest gland in the body is very readily distinguished from all other compound glands by the very close connection of its component parts, and by the peculiar character of its secreting parenchyma, which elaborates the bile, as also a greater or less quantity of *sugar* and *fat*. It is remarkable not only for its complex and peculiar structure, but also for its double circulation, being supplied with blood from two sources; viz, from the *hepatic artery* which carries to it the red or arterial blood for the support of its own structure and is principally distributed to the coats of the ducts; and from the *portal vein* which is itself an artery from the manner of its distribution, but a vein in structure. It supplies the liver with a large quantity of dark or venous blood from the stomach, spleen, pancreas and intestines, which ramifies through every portion of the organ and finally passes into a dense capillary network, where it undergoes various changes or modifications, previous to its being taken up by the hepatic viens and conducted to the right side of the heart. By this arrangement all the material obtained by the blood from the chylopoietic viscera must pass through the liver; an anatomical fact which indicates that it contributes materially to the support of the functions of this organ.

In viewing the intimate structure of the liver it is found to be composed of *Secreting parenchyma*, consisting of the lobules of the liver and the networks of hepatic cells, the biliary passages which are formed in the network and the efferent biliary ducts; a large number of bloodvessels, consisting of the ramifications of the hepatic artery, portal vein and hepatic veins; and a considerable number of *lymphatics* and nerves; and finally a peritoneal investment.

Leaving out of view the artery, lymphatics and nerves the liver is composed of three systems of tubes, which are more especially connected with the performance of its functions, in the ultimate ramifications of which are situated a great number of minute cells more or less spheroidal in form, but often flattened and many sided from mutual compression, and are arranged in small masses or lumps, thus forming what is known as the "lobules." These lobules are separated from each other by a network of capillaries formed from the ultimate division of the portal vein, and the centre of each lobule is occupied by a capillary plexus which empties its blood into a central vein passing to the formation of the hepatic venous system. Thus the portal system is similar to an areolar body holding in its interspaces small masses of liver or hepatic cells, while the hepatic venous system is very like a head of cauliflower, consisting of central veins or stalks, with clusters of cells adhering to the extremities.

The hepatic ducts do not commence irregularly in the lobules, but usually present quite a uniform appearance, commencing from $\frac{1}{100}$ to $\frac{1}{25}$ of an inch from the origin of the hepatic veins and accompany in their passage out of the liver the portal vein.

The connection between the biliary ducts and hepatic cells takes place only on the surface of the lobules and not in their interior, and hence it is evident that bile formed there must reach the duct by being transmitted outward from cell to cell, by virtue of a physiological action called *osmosis*, which vegetable physiology informs us involves no impossibilities.

The cells, the masses of which form the lobules are similar in shape to the smaller epithelial scales which line the mouth, and this similarity of appearance led many anatomists to assert that they were the lining membrane or epithelium of the bile duct, which hypothesis has been proven to be erroneous by more recent investigations. Kolliker desscibes them as a *secreting parenchyma*, and draws a decided distinction between them and the proper epithelial scales that line the biliary ducts.

This is a point of much importance as regards the functions of the liver, for if these cells are simply an epithelial covering of the duct, then it is evident that the secretion of bile is the principal office of the gland; but if, as recent investigations seem to show, their main physiological character be simply that of a distinct mass wholly independent of the biliary ducts, and with which they are only connected by contact, then it must be acknowledged that this organ has other and more important functions to perform, and that the *secretion of bile is in a measure a secondary one.*

Having thus given a brief sketch of the minute structure of the liver it will be necessary to inquire into its peculiar functions, and first it may be noticed as a blood making organ, and it may be affirmed that from whatever point we view the physiology of blood-making, the liver holds an important position.

It is probable that the blood experiences more known changes while passing through this gland than in any other organ in the body, and as recent investigations have been to a great extent directed towards them, much valuable information has been obtained in regard to this important action. And whether we consider the preparation of substances for absorption or solution; the further fitting of this material to be appropriated by the circulating medium; or the elimination from the nutritive fluid of those effete substances that may destroy its healthy condition, in each instance, its secretions play an important part. It is, in short, the crucible in which the metal is melted, as well as the mint from which it goes stamped as currency, and prepared to supply the wants of the animal economy.

The blood comes to the liver in a very watery condition, especially *during digestion*, when drink as well as food have been partaken of; the number of red blood corpuscles is relatively small, and they have a "peculiar color, spotted appearance, and irregular outline," while the albumen and extractive matters are moderately increased. A large amount of water being necessary in the formation of bile, the serum of the hepatic venous blood, is *much less* abundant than in the portal blood, while the *colorless corpuscles* are much increased in number as well as materially altered in size and shape, and particularly is this the case as regards the *red* corpuscles of the hepatic venous blood where they present a "sharp outline, and a very slight, although a recognizable central depression."

"If we assume the solid constituents of the two kinds of blood to be equal, the amount of water in the portal blood will be to that in the hepatic venous blood during digestion, when little fluid has been taken, as 4: 3, and after the completion of digestion not unfrequently as 1: 4, (Lehmann).

The remarkable observations of Weber, which were afterwards confirmed by Kolliker, are of exceeding interest as casting much light upon this subject respecting the extensive formation of blood corpuscles in the liver of the embryo. They found that towards the termination of incubation of the hen's egg, the liver assumed a yellow color instead o the peculiar reddish-brown it had previously. At this time a rapid absorption of the yeik takes place, which is carried by the blood-vessels of the yelk-sack-to the liver—and from the vessels it passes into the fine gall ducts, which at the time are full of particles resembling yelk-globules, which particles are not carried into the intestine, but seem to undergo a change by which some are formed into *blood-corpuscles*, and others go to the formation of bile. This same phenomenon has been described by Weber as occurring in the liver of the frog in the spring of the year, when the sexual organs are in a high state of excitement, and the lymphatics are particularly active. This is a highly interesting subject, and much yet remains to be investigated, but we may from the facts already presented, conclude that the liver is not only an organ for the secretion of the bile, but that it is a laboratory in which a material is accumulated, out of which the red blood corpuscles are formed, while from the residuum is manufactured the bile which is conducted away by the biliary ducts.

In regard to the secretion of the bile, the question presents itself, whether the biliary constituents exist already formed in the blood, or are first formed in the secreting organ? On comparing the minute structure of the liver with that of the kidneys, it is evidently impossible for a pure transudation to take place, of certain particles or constituents of blood, as occurs in the kidneys; and from this, as well as many other ascertained facts, it may be safely asserted that the principal constituents of the bile are primarily formed in the liver itself, by virtue of some chemical change to which the portal venous blood is subjected while in that organ. Experiments have been instituted by Muller, and subsequently by Kunde, upon frogs, from which the liver was completely extirpated; the animals after the operation being kept in dry vessels at a low temperature, and the blood of some that were alive after two or three days, was collected—and although it was examined with the greatest care, yet no trace of either bile pigment, or cholic acid could be found in it. Moleschott has recently performed a series of similar experiments with the same results, and it may be regarded as an established fact that *the constituents of the bile are not found in the blood previous to its passage into the liver.*

The secretion of bile is continuous, but is probably augmented or diminished according to the state of the digestion; and it has been ascertained to be at its maximum about twelve hours after a copious meal, and at its minimum about one or two hours after eating.

Dr. Claude Bernard assigns to the liver another very important function, which is suggestive of other hypotheses of the physiological actions of this organ in the maintenance of animal life. His observations seem to establish the power of the liver to form *sugar* from the constituents brought there by the portal blood, and wholly independent of the kind of food with which the animal had been provided. The seat of the formation of sugar has been proven by various analyses to be in the hepatic cells, as an abundance of sugar was detected in them when the organ was in a state of healthy activity at death. This sugar passes into the hepatic venous blood, and from thence through the right side of the heart to the lungs.

There is also present in the hepatic cells a greater or less quantity of an oily fat, which, under some circumstances, accumulates in such quantities as greatly to distend the organ. This passes off with the bile, and is formed into the intestines, where it is absorbed by the villi.

Thus it is observed that there are formed in the liver two substances nearly allied in a chemical composition, viz; *sugar* and *fat*, which are undoubtedly designed for one and the same purpose, that of furnishing material for the calorifacient process, and their passage to the lungs by different routes subserves a wise purpose, as by this arrangement the carbonaceous matter is gradually transmitted to the lungs in such a manner as to prevent the blood of that organ from becoming so overloaded with it as to interfere with the due introduction of oxygen. It is necessary in order to preserve health, that the blood be provided with a sufficient amount of carbon, as well as with oxygen. The carbonaceous material, it obtains through the action of the liver, in the shape of sugar and fat, and if these are deficient, fever is the result, the tissues are burned up, and hence it is that so much benefit often arises from the administration of alcohol and other cabonaceous matter in those diseases.

Having thus briefly sketched the actions of the liver, the following conclusions are arrived at, which from the present state of our knowledge, may be presented as the functions of this organ.

1. That it is the great source of supply, or at least of the rejuvenescence of the *red blood corpuscles*.

2. That it secretes a highly complex fluid called *bile*, which is thrown into the intestinal canal and there undergoes decomposition; a portion being carried off with the fœces as effete matter, and the remainder absorbed by the villi.

3. That by some chemical process in the hepatic circulation it forms *sugar* and *fat* independently of the food, which are acted upon more or less by oxygen, and thrown off as carbonic acid and water.

4. That it is a great eliminator of carbonaceous material.

5. That it is a great contributor to the maintenance of nutrition;

first, by preventing decomposition of the various putrefactive substances found in the intestines and blood; and, secondly, by furnishing material for the calorifacient process.

CANCER—OBSERVATIONS ON ITS TREATMENT.

BY LEWIS E. MILLER, M. D.

In some cases of scirrhus and carcinoma, Iron has been found of great curative value as has been attested to by Carmichael, Justemond, Denmann, Tuzett, Dupogett, Thompson, Rust, Volker, and others. In other cases, where there has been an obstinate and malignant cancer or cancerous and fungous growth, the efficacy of Gold has been extolled. It is particularly recommended in cancer of the breast by Niel, Gozzi, Westring, Rust, Hufeland, and Hermann, internally and externally applied. Krimer has used the Chloride of gold mixed with powdered sugar, and applied to the mouth of the uterus. Recamier used it as a caustic with immediately favorable results in cancerous affections in general, but more particularly in carcinoma of the uterus. Helm and Wendt, recommend the chloride of gold in scirrhous indurations of the tongue, as well as the true *Carcinoma linguæ.*

Berard, Lisfranc, and Foiese cured carcinoma of the mammæ with the internal and external use of Iodine and the iodide of Potassium. Foiese says he used in half a year, thirteen ounces of the iodide of potassium. Lisfranc speaks highly of the Iodide of lead for external application. Fanchon placed upon scirrhous nodes very small sacs of muslin which contained this mixture:

R.	Iodide of Potassium,	5. parts,
	Sponge, pulverized,	10. "
	Ammonia, muriate of,	40. "
	Chloride of Sodium,	10. "

together with a little Camphor and Opium.

The Iodide of Iron has also obtained a high reputation as a remedy in cancer.

In the FIRST volume of the COLLEGE JOURNAL there was published Landolfi's treatment of cancer, and although it has been published as an excellent mode of treatment, and has performed the voyage of the world, "*Tour du monde*," yet it has everywhere fallen into merited disrepute, for its prominent radical cure has proved illusory, and it can not prove of any more value than any other process of cauterization.

The experience of those who have made a trial of that medicine, has proved *after*, what chemistry taught *before*, that his arbitrary and unscientific mixture of mutually decomposing substances must produce nothing but a paste of impure chloride of zinc.

By the application of this paste, moreover, the patient is liable to be constantly effected by the chlorine gas which is set free, and which may do harm to the sound surrounding structures, or may produce dangerous disorders of the respiratory apparatus. I ascribe my brother's, (T. C. Miller,) first cause of sickness, to the preparation of Landolfi's paste, notwithstanding he prepared it in the open air, on account of the disagreeable fumes which he was aware would be set free.

In a lecture on "Cancer Cures and Cancer Curers," by T. Spencer Wells, he spoke about Landolfi's method, and said: "Landolfi used to assert that out of four thousand cases of cancer he had treated, the disease had not returned in three thousand. This is what Landolfi *said*. He never offered the *proof* of the truth of his statement. But Landolfi has not appeared to be more successful in Germany than in France. In November, 1853, he was called to the reigning Duchess of Anhalt Gothen, to remove a cancer of the breast. In January of 1854, Dr. Brunn, a member of the Superior Medical Council of the Duchy, published a pamphlet on Landolfi and his method, in which he announced the success as complete; yet on the 13th of July, 1855, the Duchess died of a return of the cancer of which Landolfi was reported as having cured. Other cases treated at Gothen and Munich, died or relapsed. He treated Dr. Saypert at Dresden, and he died. He treated a Prince of Prussia, and was decorated with the Order of the Red Eagle; but here the *cure* was but *cicatrization*, for I have been assured that the disease was cancroid of the face, and that it has returned.

"Dr. Valentine of Berlin, tried the method in forty-three cases, and published an article in its favor in July, 1854, but in July, 1855, only one year later, he wrote to say that it had entirely disappointed him. So at Vienna, in October, 1854, Dr. Weinberger published reports of thirty-three cases treated to his knewledge by Landolfi. One of the cases reported as cured, relapsed while Dr. Weinberger was correcting his proof; and ten months later he wrote that in cases of medullary cancer, the disease always returned, even before the cicatrization of the wound, and that the internal use of the chloride of bromine had no influence whatever in preventing a relapse. Landolfi, by his ministerial authority, *selected* six cases at the Vienna Hospital, and treated them under the observation of a committee, yet he only cured one, and that was an innocent tumor, a partial hypertrophy of the mamma, for which he destroyed the whole breast quite unnecessarily, and produced a large, unsound cicatrix.

"Of nine cases of cancer of the breast treated by Landolfi at the Salpetriere, two died, in four the disease was aggravated, and in the three in which cicatrization took place, the disease reappeared. Not one of the nine was cured. He treated three cases of cancroid, and cured one. In the second, the disease reappeared after cicatrization, and in the third, it was much aggravated. So much for the three thousand reported cures of Four Thousand Cases!"

POISONING BY TARTAR EMETIC.

BY PROF. CLEAVELAND.

For a long time the profession has been frequently startled and astonished at the apparent fact, that with a few there was a secret knowledge of a slow but sure and deadly poisonous agent, or agents, which had been used for the felonious destruction of human life, but which had eluded the search of the chemist and toxicologist.

Tartarized antimony and potassa, was so often prescribed as a *remedy* by the profession, that, although the writers on Medical Jurisprudence mentioned cases of poisoning by this salt, it is not to be wondered at that the researches and investigations which were being made had no reference to this agent.

Christison, while he knew the poisonous effects of Tartar Emetic on the system, had his attention drawn to them so slightly, that he said "Poisoning with antimonial preparations is not very common."

Beck seems not to be aware of the dangerous influence of the continuous use of it in *small* doses, for he says: "In *large doses* it must undoubtedly be esteemed a poison."

Dr. Taylor said of it: "This substance is by no means so poisonous as it is often described to be."

When we reflect that these authors must have been swayed not a little by the prevailing opinions and practices of the profession, we are not surprised that they were slow to comprehend the toxicological power of this agent.

But modern researches have shown that it does not require large doses of this preparation to produce disease of the system, which results in death, and that this may be and often is caused by the continuous use of comparatively small quantities. The researches of modern chemists have also equalled the ingenuity of perpetrators of crime for they have discover- unmistakable proofs of the presence of this poison, when it has been used for any considerable time.

Although tartar emetic passes from the stomach in the act of emesis or the carthasis it produces, still not all is thrown off, and particularly when administered in doses too small to quicken the action of the alimentary tube, and it is absorbed and has been detected in various parts of the system.

William Palmer, whose murder of John Parsons Cook caused so much talk in the sporting circles of England, was sufficiently acquainted with the deadly power of this agent as to lead us to suppose he had not neglected its use. Cook suffered during his life with symptoms exactly like those produced by emetic tartar, and that was discovered in his tissues after death, although none had been prescribed for him as medicine. These and other facts led to an examination of the body of the wife of Palmer who had died fifteen months previously, and in her body was found so much of the antimony that the prosecution was ready to try him for the murder of his wife if they did not succeed in getting him convicted of the murder of Cook.

Daniel McMullen died in June, 1856, of repeated small doses of tartar emetic given him by his wife to produce his death. On examination, the body was found to contain a large amount of antimony, and the wife was found guilty of murder and transported for life.

About a year since, a Mr. Hardman gave tartar emetic to his wife, and she died from the effects it produced. The antimony was found in small quantites in several of her organs. The husband was found guilty the murder, and executed in August last.

The frequency of these poisonings, as they have been brought to public notice of late, led Dr. Alfred Taylor to publish an article in Guy's Hospital Reporter, in which he proves that the continued use of small doses of antimony gives rise to very serious illness and ultimate death, and he quotes the examinations of Dr. Mayerhofer, of Munich, Dr. Wetzler, of Augsburgh, and Dr. Jankowiech, of Ofen, upon themselves, in proof of the poisonous nature of tartar emetic. Each of these physicians used the salt until it produced such effects as compelled him to discontinue it.

These and other similar facts prove that the objections to the use of tartar emetic, which have obtained with some in the profession, are well founded, and that it is far too dangerous and deadly to be used with safety as a medicine.

ON THE USE OF CHLOROFORM IN THE TREATMENT OF CROUP.

BY F. M. TATE, M. D.

Comparatively little has been written by members of the medical profession in regard to the propriety of using chloroform in the treatment of croup; yet there have been a few cases reported, in which this agent has been used with entire success, after the ordinary mode of treatment had failed. But, I believe in every instance, as a last resort, when death seemed to be the inevitable consequence.

While I am aware that the use of chloroform would be strenuously opposed by many members of the profession as a remedial agent in the treatment of any and every stage of croup, I can not see the impropriety of administering it in this disease; especially in the pseudo-membranous variety, after all the remedies in general use have failed. There is no obvious reason, in my opinion, to deter us from resorting to its use in cases of this character, more especially when the friends of the patient are opposed to the performance of tracheotomy, which is nearly always the case.

Dr. Jeffrey has reported a case in the *Peninsular Journal*, (vol. 1, No. 10. p. 380,) in which he used chloroform with perfect success, (after the usual treatment in such cases had failed, and death seemed near at hand) in the case of a child between four and five years of age. But, wishing to report one which recently came under my own care, I will defer calling attention to cases already reported.

Case.—On the morning of November the 8th, 1857, I was called to visit the child of Mrs. P., a short, rugged boy eight months of age. On my arrival I found him in the last stage of croup, of the pseudo-membranous variety, incapable of swallowing and with every symptom of a speedy and fatal termination. It being impossible under the circumstances of the case, to adopt the general plan of treatment; and there being no time for delay, I resolved to try the virtue of chloroform, in connection with the carbonate of ammonia. These agents were given by inhalation, with occasional intermissions, for three hours. A handkerchief was partially saturated with the chloroform and held in such a position as to allow the vapor to become well diluted with air before entering the lungs. In the course of half an hour there was a perceptible change for the better, as his pulse became stronger and respiration less difficult. In six hours he seemed much improved, and "nursed" as well as usual. From this time onward he rapidly improved, until every symptom of the disease had disappeared.

In conclusion I have one question to ask, viz: If chloroform can be successfully used in the treatment of the last stages of croup, would it be advisable to use it in the earlier stages? I would be pleased to learn the views of some of the more experienced members of the proisfeson in regard to this subject.

LILAC, LILACINE ETC.

BY PROF. E. S. WAYNE.

OF THE CINCINNATI CHEMICAL LABRATORY.

In reply to the Botanical queries of Dr. W. Rose, in the December No., 1857, of the College Journal, I would say that the medicinal value of the common lilac, (syringia vulgaris) has been highly spoken of by French physicians as a febrifuge. M .Alphonse Meillet states, that in many provinces of France, especially in that part of Berry called Brenne, which is marshy and insalubrious to a high degree, the peasants use no other remedy for the intermittent fever, which prevails there. An infusion of the leaves and bark is used, they as well as the flowers contain a peculiar bitter, crystalizable principle, *lilacine.* It is said that the unexpanded leaf buds contain a much larger amount of this bitter principle than the full-grown leaf or the bark. Lilacine is not an alkaloid, it is insoluble in water and acids, boiling acetic acid dissolves it, but it separates unchanged upon cooling. Lilacine may be attained by treating the bruised leaves or bark with water, concentrating the infusion by evaporation, and to the clear liquid adding sub-acetate of lead as long as it gives a precipitate, separating the precipitate by filtration and passing sulphurated hydrogen gas through the filtrate to separate the excess of lead; filter, and evaporate the liquid to dryness upon a water bath, and treat the dry mass with boiling alcohol, decolorizing with animal coal and set the clear alcoholic solution aside for spontaneous evaporation, and consequent formation of crystals.

In regard to Zizia aurea and Sinum latifolium I would remarkthat they both belong to the natural order, Umbelliferæ: the Zizia is a common plant in our fields, and the Sinum an aquatic plant. Their medicinal properties are very similar, and I should presume the seeds to be the most reliable portion of the plants. They are both acro-narcotics and should be used medicinally with due caution, an over dose would produce results similar to that of Conium.

EDITORIAL DEPARTMENT.

THE COLLEGE JOURNAL OF MEDICAL SCIENCE.

One more year has passed, and one more volume of the College Journal has been read by our friends, the subscribers. And it is proper that we cast a glance at the past, while we are laboring for the future.

Two years ago we commenced the enterprise of furnishing the profession with a *cheap*, but strictly scientific Medical Journal, as was avowed in the Prospectus "*in order to aid in the advancement of Liberal Medicine*," and such has been our continuous endeavor since then.

Although there were then published several periodicals more or less devoted to medical matters, and much more liberal than the organs of the old school societies and Colleges, yet we were of the opinion that a truly scientific Journal exclusively devoted to Liberal and Rational medicine, would be far more efficient and satisfactory than any of the periodicals then in existence. We also hoped to *unite* the friends of our cause residing in different parts of the country, in sustaining and forwarding our work, and thus gain that strength and energy which is ever found to attend true co-operation.

The College Journal appeared two years ago, offering *forty* very large pages of matter, printed with clear type on clear white book paper, at the unprecedented low price of *One Dollar a year*. Before the close of the volume, we had purchased the Worcester Journal of Medicine, and united its subscription list to ours, and one year since we enlarged the Journal to *forty-eight* pages a number keeping it at its former low price, thus making it by far the *cheapest medical perodical in the world.* Since then we have also purchased the American Medical Journal, thus uniting on one periodical the patronage and talent that had previously been bestowed upon the three.

One year ago we had become confirmed in the opinion that we had judged rightly of the wants of the profession, and we have endeavored to make the College Journal the true exponent of the idea which gave it birth. We commenced the volume for 1857 as we then thought under very encouraging circumstances, but during the past year there has been such a pecuniary revulsion as to cause the severest embarrassment to many periodicals and the suspension of several medical Journals; but through the active exertions of our friends the College Journal has had constant accessions to the subscription list, until we have paid on our list for 1858 more than eight times as much as was paid before the first of January 1857.

We enter upon our duties for the present year with the kind words and the best wishes of many, and with the consciousness of having given satisfaction to all who have expressed their opinion of the course pursued by us; and in the hope that we shall be able as heretofore to satisfy our readers of our endeavor to make the College Journal of Medical Science, the cheapest and best medical publication ever issued.

The present volume will not differ materially from that of last year, but all the improvements suggested by our increased experience and facilities will be adopted; and with the promised and voluntary assistance of our friends, we feel assured it will be worth many times the subscription price.

THE SPRING SESSION.

Our friends will notice that the Spring Term of Lectures in The Eclectic College of Medicine will commence on Monday, the 8th, day of February and continue sixteen weeks, thus giving ample opportunities for the study of *practical anatomy*, and a full course of lectures in the various branches of Medical Science.

The College has three fine Lecture Rooms, and ample accommodations for the prosecution of the study of all departments of Medicine, together with Anatomical, Surgical and Materia Medica Cabinets, and being thoroughly organized and supplied with a full Faculty who are residents of the city, students will find the Spring Course of Lectures as profitable and as full as the Autumn and Winter one.

We hope those who intend to attend lectures in the Spring, will come with as little delay as possible, and now they need have no fear of finding good homes and board at reasonable prices. For further particulars, see the College Announcement, and the last page of the cover of the Journal.

BACK NUMBERS.

We have a few sets of the College Journal which we shall supply on application, and shall forward missing numbers of complete sets to such as request them. In order to supply to others missing numbers, we hope our friends will send us all numbers for 1856, and 1857, they can spare. We commenced the volume for last year with the issue of 2500 copies, and yet we are nearly out of No. 1, 3, 8, and 11, and we hope those will be sent us by all who may have duplicates. It they are directed to the College Journal, *it will not be necessary to prepay* the postage.

BOOK NOTICES.

The Principles and Practice of Obstetrics. Including the treatment of Chronic Inflammation of the Uterus considered as a frequent Cause of Abortion. By Henry Miller, M. D., Professor of Obstertic Medicine in the medical department of the University of Louisville. With Illustrations on wood. Philadelphia: Blanchard and Lea. 1858.

This work was first presented to the profession several years since under the title of *A Theoretical and Practical Treatise on Human Parturition*, but was not extensively purchased. It was then but a small sized volume, and not illustrated.

In its present form, it has been the endeavor of Prof. Miller to present in as condensed manner as possible, "an exposition of the cardinal principle of obstetrics, considered as a science and art, and to inculcate the duties of the accoucheur in the round of practice," rather than to cram the pages of the book with every topic that might have a bearing upon this branch of medical practice; and to present the conclusion at which he has arrived during *an experience of thirty-five years.*

Besides his own ample experience which gives the author a claim to be heard, the book bears unmistakable evidence that the writer is well acquainted with the literature of Obstetrics. While he is well aware of the opinions of others, he has not adopted them, however eminent in the profession those who have given them utterance, unless they accord with his own observation and reason. Thus—in *placenta prœvia*, while M. Leveret and particularly Dr. Rigby maintained that the *only resource* an accoucheur has to stop the flooding, is to deliver by turning and bringing the child away by the feet, *as soon as possible*, which idea has been generally received and acted on by the profession, Dr. Miller has not hesitated to state that milder methods may sometimes be resorted to, but he opposes turning for that purpose entirely, as well as at all times as "one which is much more likely to be productive of evil than good, either as to the mother or child."

In regard to *Anœsthesia* in labor, the conclusion arrived at is in accordance with that of all who have given a fair trial. He says: "The safety of Obstetric etherization is completely established, there being not a single authentic instance, so far as I know, of fatal termination that could be even plausibly ascribed to it." Drs. Ramsbotham and Meigs have so strenuously opposed the use of this mode of obliterating the pains of parturition, that the earnest words of Dr. Miller in its favor are extremely welcome, and must help to do away with the unfounded prejudice which exists in the minds of some, against the use of anæsthetics in labor.

In regard to the use of the *speculum*, the author considers it "indispensibly necessary," as a means of diagnosis in metritis and all diseases of the uterus sufficiently grave to render tactual examination necessary. Not many years since the war against the use of the speculum was waged with indecent virulence in the city of Louisville, and the bold and truthful words in its favor by Dr. Miller must do good.

In regard to the *Extraction of the Placenta*, we think the author as well as most who have written on the subject has erred. He says: "The extraction is affected by tractions on the cord." The placenta when it has escaped into the *vagina* may be removed by tractions on the cord, but has never yet been removed from the uterus by that means unless it had first been detached and thrown more or less into a ball. The common experiment of the boys in the street, of applying a piece of circular wet leather with a string attached to its center, to the paving stones and other substances, proves that the atmospheric pressure alone would cause the placenta to adhere to the uterine surface, with sufficient force to break the cord, if traction were made upon it, before the placenta would be removed. There would also be danger of turning the fundus of the womb within itself by such traction.

The proper way always is, for the cord to be wound around the fingers of one hand, and then just kept tense, while the fingers of the other hand are slipped upon it until they reach the placenta within the vagina or uterus, and then an edge of the placenta is to be hooked down with the fingers, and the whole mass removed through the os uteri or os externum, much in the same way as a button is removed edge first through a button hole.

The wood-cut illustrations are fair, but most of them very familiar. Some of them are a little obscure, and nearly all can be improved. The mechanical part of the work is good, as is usual in works issued from the publishing houses of Blanchard and Lea.

Disease of Women, their History, causes and Treatment by John King, M. D., Professor of Obstetrics and Diseases of women and children in the Eclectic College of Medicine, Cincinnati, Ohio.

We are pleased to announce to our readers that this long promised and anxiously looked for work is now in preparation, and, judging from the rapid sale of the Author's previous works, and the high estimation in which they are held by the profession, we are confident that this will receive a hearty welcome.

Dr. King has been actively engaged in practice for twenty-five years, during which a large share of the time has been especially devoted to chronic diseases and those peculiar to females, and he will be able to present to the profession the results of his own successful experience in the treatment of those diseases, which will materially enhance the value of his work above that of a *mere compiler who has had no experience.*

Illustrated Manual of Operative Surgery and Surgical Anatomy. By M. M. Ch. Bernard and Ch. Huette; translated and prepared for the use of the the American *Medical Student,* by Prof. Van Buren, and Dr. C. E. Isaacs. New York: H. Bailliere. 1857.

The above work is designed to accompany surgical text books, being made up principally of cuts and their discriptions. The engravings are exhibited with and without coloring. In this book the purely operative part of surgery is beautifully displayed, as well as the anatomy of the parts implicated in such operations. As a mere Manual of operative surgery it does very well, but for the general practitioner of the art something more extensive is demanded. There are other highly illustrated surgical works that are superior to it for the active surgeon. The surgical anatomy depicted in this Manual is valuable to the student as a source of such knowledge, and to the practitioner as a remembrancer. As the work was originally issued several years ago it does not contain many improvements and methods of operating that are now known. As has been intimated, it is a fine picture-book; and might answer well as a Christmas or New Years' gift from a practitioner to his pupil.

Transactions of the Medical Association of Southern Central New-York, at the Tenth and Eleventh Annual meetings, 1856–7, Binghampton, N. Y.

The above transactions have been issued by the society in pamphlet form, and extend through one hundred pages octavo. The pamphlet contains the reports of cases, and committees upon various medical subjects; also some interesting observations upon subjects under discussion. The above method of making known the transactions of State and County medical societies is highly creditable. Reports of Medical Associations are frequently sent to medical Journals for publication, when they do not contain much except what is purely of a *business* character, which must prove exceedingly uninteresting to all readers except to those who attended or belonged to the association. The advertising columns are the proper places for many such business reports. The physicians of New England do not care to be informed *quarterly* of the name and habitation of the President, Vice President, Secretary, Treasurer, and members of various committees of a county society in Wisconsin, or Texas; or *vice versa.* But physicians of every State do care to read the reports of Societies, however remotely located, if they contain matter of a profitable and scientific character.

In the *transactions* under review, the report on the "Puerperal diseases of lying-in Women" is too brief, and adds nothing to the present stock of knowledge upon that subject. The author, Dr. Chubbuck of Elmira, evidently had no definite views of his own upon that subject. He quotes largely from Meigs to prove that puerperal fever is not contagious, an author who seemingly entertains views which coincide with his own, yet the testimony of the writer cited, and that furnished from other sources by Dr. Chubbuck, is very unsatisfactory, and might be used with telling effect by one holding opposite views.

Dr. Orton, of Binghampton, contributed a paper upon "*the important assistance which the chemical pathalogy of the urinary secretion may afford us, in arriving at a correct diagnosis, not only of diseases of the kidneys themselves, but of many observed conditions of other organs, or of derangement of the general system, resulting in the establishment of a diathesis.*" He reports three cases to show that when it is ascertained that there exists a superabundance of oxalic acid or oxalate of lime in the urine, the use of nitro-muriatic acid proves serviceable. And during treatment that the patient should abstain from saccharine substances for food. This was the only observation of any importance in the article.

A report on Surgery was made by Dr. West, who presented to the notice of the association three cases of gangrene of old age, or that arising from ossification of the arteries. In every case the disease apparently commenced from a corn on some of the toes, as is often the case, in each case the result was unfavorable. Cases of dislocation of the clavicle were reported, and in all of which the *reduction* was easy, but it was difficult to retain the bone in place. Such is always the case, especially when the dislocation occurs at the scapular extremity of the bone. The arm after the reduction, is allowed such freedom of motion from the mobile condition of the shoulder, that the ligamentous union is not short and firm enough to retain the extremity of the bone in place.

Dr. Nivison, called attention to a case of enlarged *Bursa mucosa*, commonly denominated "housemaid's knee," the treatment of which proved successful. It was treated by means of pressure applied upon a well padded metallic cup, which was held in place by a double headed bandage stitched to folds of linen enclosing the cup. The tumor, the size of an orange on the front part of the knee of a patient who followed the business of horse shoeing, was rubbed twice a day with iodine ointment which was thought to facilitate the absorbent process, especially as the metallic cup kept the vapor of the iodine in constant union with the part.

Such treatment was evidently superior to the blistering and puncturing usually recommended, together with setons and injections.

There are a few points in the annual address of Dr. Eastman that claim attention. Speaking of anæsthetics he says that during the Crimean war, although these agents were used a countless number of times "no serious consequences followed from their agency," Such is a mistake, for we learn from the Anglo-French reports upon the Crimean Surgery, that many patients, with no other unfavorable symptom in their case, never reacted after coming under the influence of these agents, and gradually sunk, and died within twenty-four hours after inhaling them. Although these cases were not returned as "deaths from chloroform," yet the cause was undoubtedly from the use of that agent. While we are favorable to the administration of anæsthetic agents in suitable cases, we would have the merits of any remedial agent fairly understood.

Dr. Eastman further says that "it has been well ascertained that fewer subjects now die under the knife of the operator, than died before those agents were brought into general use." This is another statement that needs to be modified. To be sure, according to the statistics of Dr. Simpson, of Edinburg, the discoverer of anæsthesia by chloroform, it appears that the mortality from amputations immediately before the introduction of chloroform, was twenty-nine per cent., and after its introduction only twenty-three per cent., but Dr. Simpson's tables are filled with inaccuracies, and need a careful revision before a respectable conclusion can be deduced from them. It is well known that Dr. Simpson is a zealous advocate of the chloroform practice; and it is also known that his statistics were hurriedly collected to establish this particular question, and that he allowed a bias to influence him in the selection of cases and hospital reports, from which he was to establish a pre-conceived opinion.

By reference to tables gotten up at the London hospitals before and after the introduction of chloroform, reports made up for other purposes than to establish the merit or demerit of anæsthetics, it is found that the average mortality after amputation was not so great before the introduction of chloroform as it has been since. Before its introduction, 21 per cent. of all the cases of amputation resulted fatally, or less than one case in four died; since its introduction, 34 per cent. die, or more than one case in three proves fatal.

By reference to the statistical account of special branches of surgery,—for instance Lithotomy—published monthly in the *London Medical Times and Gazette*, it will be seen that the average mortality after the introduction of chloroform, as compared with that which has occurred since, is not materially different from that referred to above, in regard to amputations. These conclusions need one consideration, which will modify them somewhat. Since the introduction of anæsthetic agents operations are performed upon patients so much enfeebled and exhausted by disease or injury that they would formerly have been condemned as hopeless. Many such cases now result fatally after the operation that once would have terminated in the same way without any surgical interference. Such cases should not be considered in an argument against the use of the anæsthetics. If they were, then the per cent. of the fatal cases would seem too great to compensate for the temporary absence of pain that is produced by these agents.

Treatise on the Practice of Surgery. By Henry T. Smith, M. D., author of a Treatise on Operative Surgery, etc. Philadelphia: Lippincott & Co., 1856.

A little more than a year ago, this work came under our observation, but on account of the importance of other matters, it has not received notice in the pages of the Journal. Upon examining it closely, we find it to possess so many censurable points that were Dr. Smith an adversary of ours, we might congratulate ourselves upon the fact "that our enemy had written a book."

The Treatise was evidently intended by the author to serve as an introduction to, and accompany his larger work on Operative Surgery. It was apparently designed also to be used as a text book of the Principles of Surgery, in the School where the author occupies the Chair of Surgical Teacher.

Considering the talent and experience of Prof. Smith, it is a matter of some surprise that he should have caused or allowed such an imperfect surgical work to pass his hands. This Treatise is every way infeor to his Operative Surgery. It is exceedingly faulty in orthography, unreasonably deficient in detail upon subjects that ought, if taken up at all, to receive a respectable canvassing; it is unsafe in some of its prescriptions; and is in many cases grossly incorrect in anatomical description. To a few of these imperfections attention will be more particularly called.

The orthography of Hind, Desault, Macartney and other proper names familiar to every practitioner in the land, is faulty. Also, there are so many errors in the spelling of common words throughout the book that the sin becomes unpardonable. In some cases these errors change the sense of the text, or render it obscure, or ridiculous. On the 59th page, where the contractile nature of the coats of an artery are discussed, the text reads: "when cut transversely, it is the circular fibres which lose it," instead of close it. The compound word coraco-brachialis, is written "coracoid brachialis." "Advertised" is put for advised, and "brachialis internus" for brachialis anticus.

On the 369th page fracture of the surgical neck of the humerus is discussed. And the upper fragment is said to be rotated by the pectoralis "minor." That muscle being inserted into another bone, of course could have little to do with such rotation. On the same page, while alluding to the same fracture, shortening in the arm is said to take place from the action of the "deltoid" and "coraco-brachialis muscles," which, arising from the scapula, are inserted into the "radius and ulna." Still on the same page the "supra-" is put for the infra-spinatus muscle. On the 501st page, the "sub- and infra-spinati" are placed for the supra- and infra-spinati, and subscapularis muscles. On another page the "pyramidalis" muscle is written for the pyriformis. Also, on the 590th page, where it reads "lens," it should read cornea.

Under the head of Cold Abscesses, the author has made a repetition of his "treatment" which makes an awkward blunder. In concussion of the brain, the author says that the pupil of the eye is generally "dilated"—and in compression, that it is "contracted." The reverse is the true character of the pupil, in cases of pure concussion and compression of the brain.

In descanting upon dislocations of the head of the radius, the author is evidently in error in regard to the appearance of the arm and the manner of treating it. In the treatment of cancers with large open surfaces, there is a too reckless use of arsenic advised. That being an accumulative poison, enough might be absorbed in some cases to produce death. Malgaigne's method of treating fractures of the patella, is incorrectly described. Dr. Smith claims as his own, a method of treating pseudarthrosis which belongs to another.

The use of the isinglass plaster in the dressing of wounds is not alluded to, nor that of the flannel bandage in the treatment of chronic ulcers. There is too little said about ostitis and periostitis; also about wounds of the viscera of the body; better been left unmentioned.

The illustrations in the work are very creditable, and some of them are original. We have mentioned a few of the many faults in this work, and hope that future editions may appear without them.

Materia Medica, or Pharmacology and Therapeutics. By William Tulley, M. D.

The twenty-third part of this gigantic work, embracing a part of the Proem to Esstomatics, and a part of the Proem to Cathartics, and the whole of that to Emetics, has just been received. The whole of the first volume, it is hoped, will be finished this winter. We hope the health of the Author will allow him to finish the valuable undertaking he has so ably commenced.

Dunglison's Medical Dictionary. Fifteenth Edition. Revised and greatly enlarged. Philadelphia: Blanchard & Lea. 1857.

Prof. Robley Dunglison, the well known author and teacher, has bestowed indefatigable labor upon this late edition of his valuable Lexicon. From the great number of additional terms that have been introduced into the fifteenth edition of this work, it is made more desirable than previous ones.

First Book in Physiology for the use of Schools and Families. By Worthington Hooker, M. D., Professor of the Theory and Practice of Medicine in Yale College. New York: Pratt, Oakley & Co. 1857.

This little work, as its name imports, is designed for beginners in the study of physiology, whether adults or children, and is intended as introductory to the larger volume, by the same author. We are pleased to see that physiology is being so extensively introduced into our common schools, but we do think that as text books, there are others far superior to this to place into the hands of beginners. In teaching any science, and especially that of physiology, it is essential that the fundamental principles be correctly presented, so that the learner, as he begins to consult larger works, may not be compelled to unlearn what he has been already taught to regard as the truth.

In speaking of the circulation of the blood, the author represents the heart as a powerful forcing and suction pump, keeping up by its action a continuous blood stream. This idea is well known by all physiologists of the present day to be too absurd to find a place in any work professing to *teach* physiology. The illustrations are very well adapted to convey the ideas of the author, and might be commended, provided they taught *facts*.

EDITORIAL ABSTRACTS.

Neuralgia.—Dr. Declat warmly recommends valerianate of ammonia in neuralgia, nervous headaches, and hysteria, in doses of one or two fluid drachms, two, three, or four times a day. Other physicians who have used it in these affections speak highly of it. It may be prepared as follows: Take of distilled water four fluidounces; valerianic acid one drachm; carbonate of ammonia, a sufficient quantity to neutralize the acid; then add of alcoholic extract of valerian, two scruples.

Hemorrhages.—A solution of pure sulphate of alumina, saturated with gelatinous hydrate of alumina, and then heated with an excess of benzoin, during six hours, at 176° F. and filtered, is highly spoken of by M. Mental as a prompt and efficient styptic in hemorrhages from large orifices.

Pertussis.—An excellent remedy for whooping cough, amounting to nearly a specific, is the following: Take of syrup of black cohosh four fluidounces; tincture of prickly ash berries, half a fluidounce; diluted nitric acid, twelve drops; mix. A child between two and six years old, may take half a tablespoonful every hour or two; under two years, a teaspoonful. Wash the mouth with a solution of bicarbonate of soda, or potassa after each dose.

Hemorrhoids.—M. Thierry treats hemorrhoids even when large, by first blistering them, and then applying the perchloride of iron to the denuded surface, under the influence of which they shrink and disappear.

Warts.—Warts, or other growths upon the genital organs, have been removed permanently by the application of a solution of 100 grains of crystalized chromic acid in a fluidounce of distilled water; it occasions but slight pain. When these growths are abundant, small portions must be removed at a time. After the application, place dry lint upon the part, and keep down inflammation by cold water.

Cancer.—Dr. Richard Barswell has cured cancer by the internal use of a solution of chlorinated soda, from five to twenty minims being given in water, as a dose, and repeated three times a day. As a local application, a solution of one ounce of tannic acid in half an ounce of water, was used by means of a sable brush. A slough formed which was easily separated so as to permit the application of tannic acid every day; no pain was produced, and the cure was perfected in fourteen days. (Other agents may be tried as local applications to cancerous ulcers, as benzole, digitalis, chromic acid, sulphuret of carbon, acetic acid, etc.)

Ayer's Cathartic Pills.—These are said to be composed of ricinine four ounces, cathartine three ounces, colocynth pulp two ounces, aloesin one ounce, carminatives q s., Mix., divide into pills of two and a half grains each, and coat each pill with gelatine and sugar.

Sugar in Urine—May be detected by the following formula of Prof. Krause. Dissolve one drachm of bichromate of potassa in water, and of this solution and concentrated sulphuric acid, take each two drachms. When glucose urine is treated with an equal bulk of this fluid, the reddish-yellow color changes in a short time, (*instantly* by the application of heat,) into a bluish-green color, more or less dark, with an escape of formic and carbonic acid with effervescence. A dirty brownish-red color results if no sugar be present.

Inhalations in Lung Diseases.—Dr. Coxe, of New Orleans, speaks highly of medicated inhalations in diseases of the respiratory organs, as possessing positive palliative and curative powers, and as an *auxiliary* to other treatment not unfrequently turning the scale in favor of recovery.

He mentions several cases of asthma and clergyman's sore throat, and thinks if they were treated with inhalation, in conjunction with other appropriate remedies, "few cases would probably be found of difficult management or cure."

He uses opium, conium, belladonna, stramonium, cyanuret of potassa, balsam and oil of copaiba, balsam of tolu, oil of cubebs, etc., etc.

In cases of chronic bronchitis he frequently uses a mixture made according to the following formula:

℞. Conium ʒij.
Opium ʒj.
Tinct. Opium, Camph., f℥jss.
Balsam Copaiva, fʒjv.
Laurel Water, f℥j. M.

Four or five tablespoonfuls of water being poured into the inhaler, one teaspoonful of the liquid is added, and the inhalation is carried on five or six times a day. At first the inhalation is kept up only for a few minutes at a time, but afterwards it is kept up for half an hour or more.

Gourd Seeds in Tape Worm.—We have repeatedly spoken of an emulsion of pumpkin seeds for killing the tape worm. Dr. Reimoneng has used an emulsion of gourd seeds, which he says has succeeded in destroying the worm after the failure of other means. He orders about two hundred of the seeds to be peeled and reduced to a paste by the addition of castor oil and honey, and these taken at a dose, fasting. Two hours after, more castor oil is to be taken, and no food until the medicine has acted on the bowels.

Otalgia.—Prof. Malmsten of Stockholm relates a case of a patient presenting some of the symptoms of typhoid fever, but the more prominent symptom was most excrutiating *earache.* Twenty drops of chloroform put in the meatus, gave perfect relief. The next day a slight attack was cured by the same agent.

Colchicine.—M. Oberlin has obtained a neutral crystalline principle from the Colchicum antumnale. It has not yet been used in medicine to any considerable extent, but the experiments of Prof. Crawcour of New Orleans, and Mr. Heinrich and others have proved that like other acrid, irritating cathartics, it acts upon the stomach and alimentary tube very powerfully causing profuse vomiting and purging, with heat, thirst, tenderness of the abdomen, and debility; resembling Elaterine, Colocynthine, and Podophyllin in their action on the system.

It was tried on frogs, by Prof. Albers of Bonn, and he concluded that it may be considered the medicinal principle of the plant. Mr. Schroff has compared the action of the bulbs and the seeds of the plant, and he also found an over dose on those parts to produce the same effects of the colchicine, thus proving it to be the active principle of the plant.

Phytolacca decandra.—Dr. C. S. Fenner, of Memphis, and Dr.

Parry of Indianapolis speak of this agent as an *internal* remedy of great value in ophthalmia, especially with granular lids, and when complicated with rheumatism.

Imperforate rectum.—Drs. Bigelow and Jackson, are opposed to this difficulty being operated on as not likely to be successful. Dr. Cabot says, that he had never known it to succeed ultimately. Dr. Jackson said that Dr. J. C. Warren had told him he did not remember a single successful case.

Stillingia sylvatica.—Dr. Frost of Charleston S. C,. said, eleven years ago: "This article has been in use many years, and reports of its effects still reach our ears from legitimate and illegitimate sources. * * *. It exerts an influence upon the lymphatic vessels which mercury can not equal, and is therefore an important medicine in its diseases, * * *. It has proved valuable in scrofula."

Dr. T. Y. Simons says he had tried many means to cure a patient of enlargement of the tibia, and nodes and other severe diseases of the bones in other parts of the system. She had not been benefitted until she took:

R. Stillingia root, ℥iv,
Water, Oj. M.

Simmer until one-third of the water was evaporated. This she took in twenty-four hours.

After the use of this drink some months the patient was well.

MISCELLANY

MEDICAL JOURNALS—THEIR SIZE AND PRICE.

Our printer has amused himself with comparing the amount of matter in each number of the College Journal with that of other medical periodicals published here.

Without reckoning the cover or advertising, each number of the College Journal has what the printers call 73,440 ems, or *squares* equal to the space occupied by the letter *m*.

If the cover and the advertising form and the circulars that are sent, all of interest to the medical profession, are added, each number on an average has about 110,000 ems, equal to 1,320,000 ems a year, and all original matter, or that not copied from any other Journal, in large readable type, on clear white book paper; and these *million and a third* ems are furnished, together with numerous cuts, for simply *One Dollar* a year.

The Western Lancet, will compare favorably in size and price with Medical Journals published elsewhere. Each number of it contains 77,440 ems. If to that is added its cover and advertising department touching medical matters, tailoring etc., it has about 90,000 ems to a number, or about 1,080,000 ems a year; like most Medical Journals, made up in part from copying articles from others; and its price is *Three Dollars* a year.

The Medical Observer has 55,000 ems a number, or if the cover and advertisements of Rail-roads and medical matters are added, it amounts to about 65,000 a number, or about *three quarters* of a million of ems a year, made up in good part of articles copied from other Journals, which are however usually better than the original matter, and the price of it is *Two Dollars* a year.

The number of ems furnished by the College Journal, to its readers for each mill they pay is 1320, the *Western Lancet*, furnishes 360 ems for a mill, and the *Observer* 390 ems for a mill. It will be seen that we furnish our readers *more than three times* as much matter for the same money. We shall ever strive to make it the Cheapest and Best Medical Magazine in the World.

THE ECLECTIC MEDICAL JOURNAL, PHILADELPHIA.

The first number of this new monthly has just reached us. From the hasty examination given it, we learn that it is the continuation or successor of the *Middle States Medical Reformer* formerly published at Bloomsburgh, Penn. It is now owned by Prof. Paine and edited by him and Prof. M. Calkins, assisted by others of the Faculty of the Eclectic Medical College of Pennsylvania.

It is a well printed, good looking Journal, a little smaller than the College Journal, and published at *Two Dollars* a year in advance. We welcome it to our exchange list, and wish it all the success that its merit deserves.

PHARMACEUTIC GRANULES AND DRAGEES.

F. A. Reichard, the New York Agent of Garnier, Lamoreaux & Co., Pharmaceutists of Paris, has sent us some very beautiful sugar-coated

Pills of various officinal preparations. There can be no doubt that the form adopted will be popular with the physic-taking public, as well as the profession.

TO OUR CONTRIBUTORS.

We would be pleased to have you write *only on one side* of the manuscript designed to be published. All letters of a business or private character should be on a separate sheet of paper. By attention to these points, we shall be saved the labor of *re-writing* articles, which sometimes causes a delay in their publication.

KALMEEA AS AN ANTHELMINTIC.

This is a plant growing in the hilly districts of India, especially along the base of the Himalayas. It is arborescent, growing to the height of twenty or thirty feet.

The kalmeea is the powder brushed off the capsules, of a dark brick-red color. It is used extensively in India as a dye for silks, imparting a beautiful yellow color, and it is also a favorite anthelmintic among the natives.

Drs. Anderson and Gordon, surgeons to the British armies in India, speak very highly of its value in expeling tapeworm, it acting with unparalleled success; those affected invariably parted with the worm in the course of a few hours, and then went upon their military duty as if nothing had happened.

The dose of the powder is from fʒijss. to fʒiij. for an adult, of the alcoholic tincture, made by macerating ℥j. of the kalmeea in a pint of rectified spirits for two days.

It was extensively used by Dr. McKinross, of the Horse Artillery, who published an account of it in the "Indian Affairs" for October, 1853.

DIED:

At Hyde Park, Vermont, on the 25th of November, Ariel Hunton, M. D., an old and well known contributor to the medical periodical literature of our country. Dr. Hunton was one of the first in the profession to avow liberal principles and entire independence of opinion and practice.

THE

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ORIGINAL CONTRIBUTIONS.

THE BILE—ITS SECRETION AND USES.

BY PROF. ST. JOHN.

Before the venous blood from the chylopoietic viscera is allowed to reach the heart, it passes through the liver, where a fluid rich in carbon is eliminated from it called Bile, which is poured into the duodenum. Several circumstances have contributed to make the bile hold a higher position in the process of digestion than it is entitled to, as it has been supposed, that the only office of the liver was the secretion of bile, and the main business of this, when secreted, must necessarily be to take a part in digestion proportionate to the size of the organ furnishing it.

But the investigations of many modern physiologists establish beyond doubt, that there are other and more important actions performed by the liver than the manufacture of bile, all of which tend to diminish the high estimation in which it has been held as regards the process of intestinal digestion, either as a solvent, or as a mere excretor of noxious material.

Various attempts have been made to estimate the quantity of bile secreted in a given time, under different circumstances as well as in different animals, with very varied results, and in truth we have no satisfactory knowledge on this point.

In order to answer this question, fistulous openings have been made into the gall bladder or ducts of various animals; and while all communication with the intestine was cut off by a ligature, the operater was enabled to collect the secretion at leisure. M. Blondot kept a dog in this condition five years, and many of those used by Drs. Bidder and Schmidt, were killed after a two months observation while still in a viable state. The quantity which M. Blondot obtained in twenty-four hours from one of his dogs was only twelve drachms and a half, and assuming from the similarity of the food of the human species and that of the dog, that a proportionate amount of bile would be secreted for the weight of the body, he concluded that the average quantity poured into the human intestines in twenty-four hours, was from six to eight ounces. The investigations of other eminent observers have, however, been much more satisfactory. Drs. Bidder and Schmidt performed a series of experiments upon a large number of animals under a variety of circumstances—during fasting, during repletion, on full diet, and on low diet—and they found that the average amount secreted by the dog in twenty-four hours to be from twelve to fourteen ounces. On this estimate, we secrete daily from three to four pounds, which is probably much nearer the amount than the estimate of Blondot, and it is altogether probable, that even this is rather below than above the mark. It appears also from these experiments, that no relation existed between the size of the liver and the amount secreted.

It might have been supposed that the greater the weight of the organ the more productive would it have been, but, on the contrary it was found that in the sheep experimented upon, the smallest livers gave the largest amount of bile, and in the cats quite irregular ratios were obtained.

The bile is secreted from the blood of the vena porta; as the small size of the hepatic artery compared with the large size of the gland, and the small degree in which it can participate in the formation of the extensive capillary plexus of the organ, evidently disqualify it for contributing to the secreting process.

Bile is *first* found as a seperate product in the minute canals or bile ducts. It is a thick ropy fluid, of a greenish-yellow color, a bitter taste, and a peculiar nauseous smell, with a specific gravity of 1.026 to 1.030.

Its secretion appears to be continuous, but it is augmented or diminished according to the stage of the digestion. It attains its maximum ten or twelve hours after a full meal, and from then till twenty-four hours after the meal, it gradually diminishes until it reaches its minimum or the least quantity secreted about two or three hours after eating. This is of the hightest importance as regards the action of the bile in the process of digestion, for it is natural to conclude that it would be secreted in largest quantities at such times as it is most needed, and if its presence was necessary in the early part of the passage of the food through the digestive canal, it would be secreted in large quantities during active digestion.

It however does not reach its maximum until digestion is nearly completed, or at least very far advanced, and hence it may be inferred that its main object is to subserve some secondary purpose, or rather to prevent any unnatural action which may be likely to attain at that period.

It is found that the quantity is very much diminished or increased by the nature of food, as the amount obtained from the cat, under a full flesh diet, was more than twice the quantity which was secreted while under an ordinary diet. Again, fatty food is found not only not to increase it, but the secretion materially diminishes under its use. It might be anticipated, that in the formation of a substance so rich in fat as the bile, it would be materially assisted by administration of fatty foods, but experiment proves it otherwise, and it may be said that a diet of pure fat is, so far as regards the secretion of bile, analogous to a starving diet.

The color of the bile is dependent upon a variety of circumstances, as the greater concentration of the fluid bile in the gall bladder, during retention in that organ, it oftentimes having been found to present from ten to twenty-five per cent. of solid matter, while the natural amount of solid matter in fresh flowing bile is only from two to seven per cent. The peculiar quality of the food natural to the animal, causes a change in the color of the secretion, thus in carnivora it is of a yellow, ranging from a golden to a dark yellow, and in herbivora it is green of various hues Another important agent in this action is the presence of oxygen. It has been ascertained that if a quantity of yellow bile be subjected to the action of oxygen it very quickly becomes green, and if green bile be deoxidized by zinc, it again resumes its yellow color. Therefore it is very materially influenced by the amount of oxygen conveyed to the liver by the blood.

Bile as it exists in the gall bladder and intestines is alkaline, probably from the admixture of a considerable quantity of mucus, as when that has been precipitated it is ascertained to be neutral, as is also the case when examined before the admixture of mucus. Acid bile is only formed by its partial decomposition, and hence it has been stated that fresh flowing bile is neutral. As regards the action of the bile upon the aliments or substances taken into the digestive canal, many conflicting opinions have been presented, and although each have been supported by what was supposed to be sufficient proof, yet each in its turn has been doomed to an overthrow by a more successful hypothesis which followed. It has been taken for granted that the bile was in some way capable of dissolving the food and thus assisting in digestion, but how or upon what particular kinds of material it produced its effect was not known, and in fact it is only until quite recently, that *any* proof existed as to its performing this action.

The oldest hypothesis is that advocated by Boerhave, and is contended for by some physiologists of the present day, which attributed to the bile the power of saturating the acids of the chyme with its alkali, and, although that may be to a certain extent correct, yet it is found by experiment that the chyme of the intestine is still acid after the bile has been mixed with it, and it is well known that a very small quantity of free acid mixed with the bile is sufficient to destroy its alkalinity.

This however takes place in the following manner; the alkali of the bile being in combination with the fatty and resinous acids, when thrown into contact with the stronger acids of the intestine, as the lactic, hydrochloric, etc., unites with them, setting the biliary acids free, which communicate an acid re-action to the intestinal contents or chyme, and in this regard may the bile contribute to the neutralization of the free acids contained in the chyme.

It has been observed by Dr. Bidder, that the bile has no power, or at least but very slight, of dissolving albumen, even after many days maceration. The following experiment demonstrates how small is its solvent power upon that form of albumen found in cheese, known as caseine.

Three portions of cheese were digested for twenty-four hours at 100° Fahr., one in pure water, another in water and bile, and the third in water and glycocholate of soda, when it was found that the portion in the mixture of water and bile lost only eleven per cent. of its weight, while the other two had lost seventeen per cent., showing that instead of the bile being a good solvent, it was even less so than pure water. Upon a microscopical examination of the fœces of a dog, fed entirely on flesh, and in whom the ductus choledochus was tied, thus preventing the entrance of bile, it was found that they contained no traces of muscular fibre, but it had all been digested as readily and as perfectly without as with the bile.

By experiment out of the body it is found that neither starch nor albuminous substances are essentially changed, even when digested for a long time with fresh bile.

Haller first ascribed to the bile the property of dissolving fat. It is well known that the intestinal villi have the power of taking up this substance in large quantities, and the question arises, whether it requires any modification previous to its passage, and if so, is the bile requisite to make that modification.

This seems to be answered in the affirmative by several experiments, and it is affirmed by Frerich that the bile contributes in association with the pancreatic juice to the perfect disintegration of the fat, and thus very considerably promotes its absorption.

In a dog in which the entrance of bile into the intestine was prevented by a ligature, it was found that but a small quantity of fat was taken up, only about one-half an ounce during the twenty-four hours, while a healthy, uninjured dog was, upon the same kind and quantity of food, found to absorb about ten times as much, or five ounces, which proves that although a small quantity of fat may be absorbed by the villi independent of the bile, yet its presence increased very materially its absorption, either by rendering it more susceptible of being taken up, or else the membranes more suitable for its absorption.

Again, a very important action of bile on fleshy matters which is of practical bearing as regards our health and comfort, is its antiseptic properties. It is found in animals that when no bile is allowed to flow into the intestines, the contents undergo rapid decomposition, accompanied with the secretion or formation of fœtid gases, and fœces smelling like carrion ; the same condition is sometimes observed in patients with jaundice, and although it is not attended with any disastrous or fatal consequences, yet it is excessively distressing.

In animals fed solely on starchy food, no decomposition took place, the fœces being sour rather than putrid.

Hence, the bile acts on albuminous substances to prevent decomposition, and preserves them in that condition in which they may be the more readily absorbed by the villi of the intestines. Again, the water which is contained in the bile acts as a solvent upon the soluble portions of the chyme, rendering them capable of transmission through the membranes. This matter keeps up a continuous circulation through the liver and intestines, performing on its route a double office, according as it flows from the liver to the intestines, or from the intestines to the liver. In either place it passes a filter, which is permeable to only a particular class of substances.

Prout is of the opinion that the bile acts upon the proteine compounds in a manner by which they are converted into albumen, which was apparently supported by the experiment of Frerich, that when filtered chyle is mixed with a quantity of bile, it will congulate on the application of heat.

Professor Lehmann, however, was unable to obtain a similar result, although he performed a number of like experiments. Some physiologists assert that the bile is a mere excrement, or used-up matter, which is for the welfare of the body to get rid of as soon as possible. This however is rendered untenable by the manner in which it is carried out. If it were simply effete material, it would evidently be taken from the body in the shortest possible course, and not be allowed to traverse such an extent of surface to which it would act as a foreign body, and thus occasion an unnecessary risk. The making of a biliary fistula would not only not prove an injury, but would be a decided benefit to the animal, but such is not found to be the case. That it is partly an excretion is probable, and this is undoubtedly true as regards all other secretions. It has been observed by Boerhave, that "almost the whole mass of the fluid secreted by the liver, is again drank up by the absorbing veins from the alimentary and fœcal contents before they arrive at the anus."

It may be asked if the bile is so extensively absorbed by the blood, why it is that it is never found in that fluid, as from the most careful examinations, no trace of re-absorbed bile could be detected either in the chyle or portal blood? Or why is it necessary that it be formed at all, as its short circuit from the liver to the intestines, and thence directly back into the liver may at first sight seem objectless and superfluous?

As regards the first, we may say that the bile soon after its passage into the intestine, undergoes chemical decomposition, a portion passing off as effete material, but the larger part as its soluble salts and cholic acid passing directly into the blood not as bile, but as constituents of that fluid. But if we have regard to the necessity of its formation, or to the fact that it seems useless for a substance to be formed from the blood in order to be again taken up by that fluid, we can only reply that substances are repeatedly eliminated by the action of all the other glands of the body, and all taken up again by the vessels, and we are far from being able to master the aims of nature or her mode of arrangement.

This we see is the case as regards chloride of sodium, iodide of potassium, and the salts of ammonia, etc.; and the re-absorption of cholic acid is no more unnatural than that of any other material whose particular action or use is alike unexplainable.

The bile may be said to perform the following duties, which from the present state of our knowledge is all that can be attributed to its action.

1. To remove a small amount of effete material in common with the action of all other secretions.

2. To prevent the too rapid decomposition of albuminous material.

3. To assist in the passage of oily substances through the intestinal membranes.

CLASSIFICATION OF MATERIA MEDICA.

BY PROF. CLEAVELAND.

Classification is an essential element in any science; and as Science may be defined: "Truths brought to our knowledge, and reduced to order," it will be perceived that no *science* can exist without a classification, a reducing to an orderly arrangement the truths which, when grouped in an orderly classification, constitute the basis as well as the superstructure of that science.

The science *is* the truths and the classification; and neither the truths nor the arrangements, alone, have any claim to that high designation.

A correct and scientific classification of the truths of a science consists of their being so arranged as to clearly show their resemblances, and their dissimilarities. But as matters very dissimilar from others are related to them by a continuous series of intermediate ones, the first object of a classification is usually only to show prominent and striking peculiarities, and not those of minor importance. By this, the various elements, or facts of the science are thrown into *Groups*, or Classes, which have some peculiar character that is common to all the individuals which are included in that Class, although in some other regards the several individuals may differ widely from each other.

These Classes are divided into what are called Divisions, in which are included those individuals which have other properties in commom, besides those prominent ones which led them to be grouped in the same *Class*, but which are in some regards different from each other.

Hence, the Divisions are again divided into Orders, in which are included those individuals that more closely resemble others in the same Order, than is necessarily the case between members of the same *Division;* and yet they may materially differ in some minor regards from members of the Division, but which are consequently ranked in different *Orders*.

It may be desirable in some instances, to distinguish more clearly the points of resemblances, or disagreements than is done by ranking units in *Orders*, and then they are again divided into SUB-ORDERS, and if desirable again into VARIETIES, and SUB-VARIETIES ; but this is very seldom necessary in Materia Medica.

When the Classification of any science is natural and rational, it is called by Scientists, a *System*. When the classification is simply artificial and arbitrary, it is called a *Method*. Many of the Classifications introduced by writers on Materia Medica are very methodical, and display great learning on the part of their authors, but they are not systematic, rational, or truthful ; elements necessarily tending to simplicity, and to the advancement of the Science of RATIONAL MEDICINE.

Without some arrangement or classification, the objects of Materia Medica are so very numerous as to be far beyond the capacity of any individual to retain, and new discoveries and additions often must tend rather to confuse and distract, than advance the mind. But when a true Classification in accordance with a scientific System has been adopted, each new truth will find its proper place in the orderly arrangement, and instead of causing embarassment, will serve to render the Science more complete and perfect.

As terms must be used in the Classification to express the truths of any Science which are not in common use in other branches of knowledge, it has become customary with all writers to resort to the ancient languages for those terms which are expresssive of the truths designed to be conveyed. This is in accordance with the usage of all Botanists, Chemists, Anatomists, and Scientists in general.

It is customary to use words from the *Greek* in the formation of CLASSES, and in the formation of DIVISIONS words of *Latin* origin, while to express ORDERS, words are used of Greek origin, but which have been modified by being adopted into the Latin language, or are *Latinized Greek*. As the usage appears consistent with reason as well as custom, the same rule adopted by others will be followed by me. I shall introduce but few if any new terms, and the changes I adopt will consist mainly in discarding many vague as well as incongruous and untruthful terms in common use by many writers and teachers in medicine.

In the *Rational* classification of Matera Medica, no attention is paid to the natural history of the agents or medicines. They are not considered simply as of Animal, or of Vegetable, or of Mineral origin, for agents from all these sources may fall within the same Class, Division or Order; but they are considered solely for their power as medicines on the body, to remove disease, and restore health.

In the living animal, there are, as has been remarked by Headland, four great Groups, or parts, which are to a good degree distinct and separate from each other; the *Blood*, or fluids designed to circulate through the body; the *Nerves*, which cause the motions and take cognizance of the sensations and motions; the *Muscles*, by the action of which all motion is produced; and the *Glands*, by which the fluids are acted upon, rendering the materials of which they are composed more fitted for their use, as nutrition and growth, or taking from the fluids such substances as can not be put to use.

In accordance with this grouping of the different functions of the body, Medicines are divided into Classes, each classproducing some effects upon one or other of the organs or parts of the Group on which it acts.

Some medicines change the condition of the Fluids of the body, others impress the Nerves, still others act upon the Muscles, while yet other medicines produce their impressions upon the Glands.

To correspond with this grouping of the functions of the body, internal medicines are divided into:

Class 1. Hæmatica, or medicines which influence the blood,
Class II. Neurotica, or medicines which influence the nerves,
Class III. Myonotica, or medicines which influence the muscles, and
Class IV. Adenotica. or medicines which influence the glands.

In giving these names to these four Classes of internal medicines, it is not found necessary to depart in the least from the usages of scientific writers in other branches of Science, for the words are pure classical Greek in their derivation and construction. And it is not found necessary to introduce any new terms, for these have been already in use by medical writers, although not with precisely the signification which they naturally have, and which are here given to them.

The *First Class*, or Hæmatica, are naturally divisible into two Divisions.

Divisions I. Restaurantia, medicines which enter the blood, to remain there, and thus *restore* to the fluids an element or elements which they have when in their natural condition.

Division II. Dissolventia, medicines which enter the fluids for the purpose of changing any matter that may be in the fluids, which is not naturally there in health, so that it may become less hurtful and more readily thrown out of the system.

These medicines are not naturally in the fluids, and after they have changed the morbid material they usually escape from the system along with the morbid material on which they act.

The *Restaurantia*, are divided into various ORDERS according to the materials of which they are composed, and which they *add* to the system to restore it to health. They may be divided into many Orders, each of which are capable of being divided into SUB-ORDERS, VARIETIES, and SUB-VARIETIES. These, as they are given for the purpose of themselves being added to the blood, retain their own proper name. The number of orders of the Restaurantia is as great as the number of proper groups of articles of this division of internal medicines; but the *Aliments* are a fair type of them all.

As an illustration of this Division a few orders will be given without attempting to name them all; as:

Order 1st, ALIMENTIA,
Order 2nd, TONICA,
Order 3rd, SOLVENTIA,
Order 4th, ALKALIA,
Order 5th, ACIDA,
Order 6th, CHALYBIATA.

As has been remarked, these *orders* may be divided into *Sub-orders* according as the units of which they are composed are naturally thrown again into groups. The *first* Order, or Foods, are capable of being grouped in various ways. They have been arranged by Dr. Pereira into twelve groups; the Aqueous, Mucilaginous, Saccharine, Amylaceous, Ligneous, Pectinacious, Acidulous, Alcoholic, Oily, Proteinaceous, Gelatinous, and Saline. This grouping seems faulty for several reasons, the most obvious of which is that the divisions are not natural, and the nomenclature is not uniform or scientific. The Classifications of Dr. Prout, Liebig, Dunglison and others, seem obnoxious to similar objections, and particularly as they take no account of the simplest of the Restorative fluids, and the one for the want of which the system will suffer the quickest and most severely, Water. In place of the divisions of the authors referred to above, I would propose that Aliments be divided into:

Sub-Order 1st, AQUAOSA,
Sub-Order 2nd, CARBONACIA.
Sub-Order 3rd, NITROGENIA,

Aqueous foods may be divided into many Varieties, as:

Variety 1st, AQUA PURA,
Variety 2nd, AQUA SALINA,
Variety 3rd, AQUA ALCOHOLICA, etc.

The Carbonaceous foods may be divided into:

Variety 1st, OLEAGINOUS,
Variety 2nd, AMYLACEOUS,
Variety 3rd, SACCHARINOUS, etc.

The *Second Division* of the Hæmatica, or the DISSOLVENTIA, being agents which are taken into the system for the purpose of *changing* a morbid material which is already there, take a name which is expressive of that function, and are thrown into groups or ORDERS, according as they act to destroy a peculiar morbid material.

As most poisonous agents which produce diseases, also produce still other morbid matters which are in some degree like the *originating* cause, these remove not only the *causes* but the *products* of those diseases which they antagonize.

This Division is divisible into as many Orders as there are specific diseases, or diseases owing their existence to a specific cause, and for which the profession are in possession of any remedies capable of counteracting and destroying their causes and products.

Among these divisions may be named:

Order 1st, ANTIPHLOGISTICA,
Order 2nd, ANTISCROFULOSA,
Order 3rd, AHTISYPHILTICA,
Order 4th, ANTISCORBUTICA,
Order 5th, ANTIMIASMATICA,
Order 6th, ANTICONVULSIVA.

And as many more of these antagonistic Orders as the profession have discovered *orders of diseases* which are produced by specific causes or poisons *in the fluids*, and to which also, there have been discovered specific antidotes or antagonistic agents which are capable of uniting with, and changing those noxious agents, rendering them less harmful, or not deleterious, and which also leave the system.

As the science of Animal Chemistry, and Chemical Physiology and Chemical Pathology advances, these orders of antagonistic agents will increase in number, until many diseases that are now treated empirically and with a comparative want of success, will be medicated according to the principles of RATIONAL MEDICINE, and with as much certainty as follows the use of Quinia in diseases of miasmatic origin, or the juice of Lemons in Acute Rheumatism.

The *Second Class*, or the Neurotica, are divided into three Divisions as follows:

Division 1st, Stimulantia, or medicines which axalt nervous force.

Division 2nd, Narcotica, or medicines which first exalt nervous force and afterwards depress it, but whose most marked influence is upon the *intellectual functions*. And:

Division 3rd, Sedantia, or medicines which depress nervous force.

This grand division of the Nerve medicines as well as their Subdivisions, has been clearly and ably discussed by Dr. Headland in his admirable Prize Essay on the action of medicines.

The Stimulantia are divided into:

Order 1st, Stimulantia Generalia, which act to exalt the force of the entire nerves of the system, but which have no influence upon the intellectual functions except as they are rendered more active by the increased activity of the body. And:

Order 2nd, Stimulantia Specifica, which act to exalt the force of special nerves, but produce no influence upon the intellect.

The Narcotica are divided into:

Order 1st, Inebriantia, which like all the narcotics, first exalt and afterwards depress nervous force, but whose most marked action is upon the intellect, producing inebriation, or intoxication.

In small quantities, these agents exalt nervous force considerably, and afterwards depress it but slightly, and their action on the intellect is peculiar and prominent. Hence, they are often erroneously called stimulants. In larger quantities, their exalting power is less marked and their depressing influence very much more manifest.

In small quantities their action resembles the Stimulants, except as they act upon the intellect. In large quantities they act like Sedatives, but then, too, the intellect is greatly borne down by them. When given in either large or small quantities, the intellect is greatly under their influence.

Order 2nd, Somnifera; these like the former, as do all the narcotic medicines, first exalt nervous force and afterwards depress it; but they *put the intellect to sleep*, and hence their name and use.

Order 3rd, Deliriantia; these also manifest an exalting and depressing power of which the latter is usually much more prominent, and hence they are often erroneously ranked among the Sedatives. But as they produce *delirium*, or lead the intellect captive, and sometimes in a very wonderful manner, they are properly placed with the narcotics.

The different Divisions of the narcotics have not always been clearly comprehended by teachers and writers on Materia Medica and Therapeutics, and hence very great harm has come of the confused manner in which these terms have been used, and the want of clearness and definiteness of the ideas which have governed the use of these medicines.

The intoxicators, and sleep producers, and the medicines which produce delirium are of value, each, because it possesses some power not to be found in the others; but the peculiar powers of these Orders have not engaged that careful consideration of the profession which they deserve.

The *Third Division*, or SEDANTIA include those agents whose action on the nerves are the exact opposite of the STIMULANTIA, and they are often given for the purpose of counteracting the effects of each other when given in over doses.

The Sedantia are divided into:

Order 1st, SEDANTIA GENERALIA, or those medicines which depress the force of the nerves in general; and:

Order 2nd, SEDANTIA SPECIFICA, or those medicines which depress the force of special nerves.

Neither of the Orders exert any influence upon the intellectual functions only as the nervous force of the system is depressed and the vital powers are depressed thereby.

By taking into consideration that neither the Stimulants nor the Sedatives had any special action on the brain, we can at once determine which neurotic medicines belong to the division Narcotica, and which do not.

The consideration of the classification of the muscle and gland medicines, is reserved for a future paper.

NOTES AND OBSERVATIONS.

BY THEODORE C. MILLER, M. D.

MECONIUM.—Dr. K. G. Newman, speaking in regard to the meconium, says: "The meconium, the secretion of the intestines of the fœtus in the mother's womb before the child has taken any nourishment, is black, and therefore it is considered by ignorant persons to be very acrid and hurtful, notwithstanding a little reflection will show them that it has lain in the intestines of the child for many months without producing any harm."

The haste and anxiety, then, to remove it by the use of the syrup of Rhubarb, Manna, and other similar agents is very silly and very harmful. Not everything that is black is hurtful or pernicious, and particularly the meconium is not, and if the child is allowed its natural food, the bowels will take care of themselves without the aid of laxatives, particularly as the first milk of the mother is stimulating enough.

There is no fibrine or other effete matter in the body of a healthy new-born infant until the breathing has commenced the process of oxygenation and segregation. and there is therefore none to expel. Do not be in haste, then, to cause the bowels of the infant to move. Neither wait too long. The child needs but very little food in the first days of its life, and the milk first secreted is that designed for it. Suckling is also very beneficial to the mother.

Sore Nipples.—Dr. Newman advises to wash the sore nipples as soon as the child has done nursing, dry them and wash them with the following:

R. Balsam of Peru, f℥j,
Sulph. Ether, f℥iij, M.

This heals the fissures quickly and does not harm the child, I think it, in the words of Professor L. C. Dolley; "*The truest*, safest, best."

I give another formula which I think very good.

R. Pit of Sweet Almonds, ℥ij,
Gum Arabic, ʒj,
Rose water, f℥ij,
Balsam of Peru, fʒss, M.

This is to be applied in the same manner as before directed.

Neuralgia.—In his *Researches and Observations on Neuralgia*, published in Strasbourg in 1816, Dr. Meglin advises in *Facial Neuralgia*, the following:

R. Ext. Hyosciamus,
Ext. Valerian,
White Oxide of Zinc, āāʒj. M.

Make the mixture into sixty pills. One pill may be taken every three hours. This is a favorite old prescription of the German and French physicians, and as mentioned in many of their works on Therapeutics.

Meglin also speaks highly of the Sulphate of Zinc in facial neuralgia, as well as in nervous headache I have used it with great satisfaction in doses of from $\frac{1}{8}$ to $\frac{1}{4}$ of a grain, every two hours. I often give it in the form of a pill with the extract of Hyosciamus or Valerian.

Tannic Acid in Measles.—In a recent epidemic, even at the beginning of the attack, there was colliquative diarrhœa and a very distressing harrassing cough. For the diarrhœa, I gave tannic acid, and it relieved both that and the cough in a surprising manner.

Pohl was the first to recognize the close connection of measles with Pertussis, and after him the same was asserted by Autenreith. My own experience of the value of tannic acid in pertussis has caused me to make a trial of it in measles, and the success following its use leads me to recommend it to the profession for further trial. I gave it in a solution of gum Arabic, and to children I gave ⅛ to ½ a grain at a dose, every two hours.

Epilepsy.—Paracelsus was the first physician we know of who gave the oil of Vitriol in Epilepsy. He gave ten drops at a dose in wine or water.

Other physicians since his time have used sulphuric acid in this disease. T. Sneider has recommended it in his work. In the Neuroses that appear at puberty, he recommended its use, as well as Agricola, Ruland, Glanberus, Heers, Hirschel, Quercetanus, and others.

Hildebrand was treating a patient afflicted with epilepsy and he gave the sulphuric acid to check a hemorrhage, when he observed a great amendment in regard to the epileptic attacks. He was thence induced to give this acid for the epilepsy, first to the extent of two drachms, and afterwards to four drachms a day, and upwards. He gave it to several patients who had resisted other treatment. His experience led him not to expect it to cure where the epilepsy was caused by a local organic affection, but where the state of the fluids caused the disease, he expected the best results. Hildebrand thinks with Monos, that acids, particularly sulphuric acid, have the power of moderating morbid sensibility of the nerves. Hufeland also speaks highly of sulphuric acid in diseased, exalted nervous sensibility. Haller relates many cases in which the sulphuric acid has been of great benefit in lessening the excitability of the nerves. Weckard used Haller's acid Elixir with satisfaction. Zimmerman relates many cases where he had used this remedy in epilepsy.

Tode said his experience proved that one drop of concentrated fresh oil of vitriol, in a sufficient quantity of water, was more effectual than when the oil had been diluted a length of time; and he thought it was because the acid when diluted long, united chemically with the water more than when mixed just as it was administered. This idea can be easily verified or disproven when a case is under treatment.

The combination of the acid with alcohol, or the *Acid Elixir* of Haller, is the combination which Wickard, Zimmerman, and Hirschel preferred. Volger recommends an acid elixir composed of equal parts of diluted sulphuric acid, and sweet spirits of Nitre, as a very effectual remedy. Tode uses an elixir of dilute sulphuric acid combined with equal parts of Hoffinan's Anodyne.

I often use in place of Haller's acid elixir, the Aromatic Sulphuric Acid, which is the same as what in the German Pharmacopœias is called the *Elixirium vitrioli mynsichtii*, and consists of:

Sulphuric acid, one part,
Aromatic tincture, twelve parts.

The *Elixirium acidum Halleri* consists of:

Sulphuric acid, one part,
Alcohol, three parts.

Both these elixirs are officinal in the different Pharmacopœias of Germany.

TANNIC ACID IN HYPEREMESIS. In the excessive vomiting caused by Tartar Emetic, I have found Tannic Acid of great service. In all poisonings by Antimony, it acts, as stated in Cleaveland's Lexicon as a direct antidote.

VERATRUM VIRIDE.—I am not surprised that some have expressed their opinion against the use of the *Tincture of Veratrum viride.* Emesis is not the therapeutical use to which it should be put; my brother has made trials with it, and he also is convinced that but small doses, too small to produce emesis, should be used; and those who use it in large doses are in error.

My brother puts one fluiddrachm in eight fluid ounces of water, and of the mixture he gives a dose of a table spoonful or less each hour, according to circumstances. I spoke of the use of this agent in an article on *Pneumonia*, last December.

TINCTURE OF GELSEMINUM.—In regard to this agent, I agree perfectly with Professor Cleaveland. True, I have used it only for a few months, but in a diversity of diseases. I have used it in inflammation of the kidneys with entire satisfaction.

The Gelseminum Tincture, as well as Veratrum viride, have no remedial power in *organic* diseases of the heart.

Gelseminum is a powerful sedative, but it must have other powers also. I have used it in three cases of chronic Gonorrhœa. In one case it made a very favorable impression, but in the others it did not. These cases had been under old school treatment. Two were what the Germans call Scrofulous gonorrhœa, and in one it was complicated with Arthritis. The former cases had been treated with Iodine in different forms, but without any benefit. I now give the same remedies, and they are improving rapidly. In the other case I have used the preparation of the German physician, Eisenmann, made as follows:

R. Wine of Colchicum, f℥ iij,
Wine of Opium, f℥ ss, M.

The dose is twenty-five or thirty drops, three or four times daily.

This caused the patient to improve remarkably, but did not entirely arrest the gonorrhœa. I then gave for three days, twice daily the tincture of gelseminum, and sixty drops at a dose, when it appeared to do no good, and I returned to the wine mixture, and to my great surprise, the disease was arrested the second day. The cure I think must have been caused by the gelseminum.

I am perfectly satisfied that gelseminum will cut short Typhoid Fever when given early in the disease. In Typhoid Pneumonia it relieved a patient of all typhoid symptoms, leaving a simple pneumonia, and that was cured in two days by the use of five drops of tincture of veratrum viride, once in three hours.

Gelseminum, (but always combined with Quinia or Cinchonia) will cut short typhoid fever, and even when of ten days standing. I have never found it require more than sixty drops of the tincture and ten grains of quinia.

My brother tells me that he makes use of gelseminum in obstetric practice, according to the advice of Professor King, and with entire satisfaction. It does not always answer however, but its failure I think is owing to derangement of the stomach.

RESECTION OF THE HEAD OF THE FEMUR.

BY PROF. HOWE.

A VERY bold and hazardous operation is that of Resecting the head of the Femur. It was first put in practice in 1818, by Mr. A. White of the Westminister Hospital, although it had been considered and advised many years previously by Mr. Charles White of Manchester. Mr. A. White performed the operation to remove carious diseases of the head and upper portion of the shaft of the Femur, taking away several inches of the bone. He made a simple straight incision on the outside of the thigh over the joint, going down to the articulation, dividing the capsular ligament; he then disarticulated the bone, bringing it out of the wound, and removing it with a saw after the manner of performing resection of the shoulder-joint described in the last number of this Journal. The operation has been performed many times since by French, German, and American surgeons, and with varying success.

Amputation at the hip-joint is an exceedingly dangerous operation, few cases surviving the immediate effects of removing so considerable a portion of the body in connection with the injury necessarily done to important blood-vessels and nerves near the viscera; besides, incurable diseases or injuries of the articulation are likely to prove fatal, unless removed by an operation. And then too, no artificial substitute can be made to take the place of the natural leg, when it is entirely removed.

The indications for resecting the hip-joint, though not essentially different from what they are in other cases of resection of the large joints, are by no means always clear. Extensive carious disease of the articulation, confined more particularly to the Femur, as is usually the case, and when the patient is sinking from irritation and suppuration consequent upon such a morbid condition, avoiding amputation and saving life, demand this operation. It should also be performed when the head of the Femur has been shattered by a gun-shot injury. "Picture to yourself," says Mr. Guthrie, "a man lying with a small hole either before or behind in the thigh—no bleeding, no discharge, nothing but an inability to move the limb, to stand upon it, and think that he must inevitably die in a few weeks or months, worn out by continual pain and suffering, unless the thigh be amputated at the hip-joint, or be relieved by resection, an operation I insist ought first to be performed." Resection in such cases affords the only hope of limb and life. The case may terminate fatally after this operation, as it is a dangerous one, yet it offers "an uncertain chance of escape from certain death."

In cases of morbus coxarius or common hip disease, when the irritation and suppuration are keeping up hectic that will eventually destroy the patient's life, it is often remarkable how soon those constitutional symptoms will cease after the operation, though the sinking condition of the patient would seem to forbid the simplest shock being imparted to the system.

Resection should be performed when the upper part of the thigh is pierced with fistulous openings, for the discharge arising form carious bone that is insusceptible of ankylosis, and there is no hope that the patient will hold out until the dead bone is entirely ulcerated away and discharged. After the operation, ankylosis will either take place by a union of the clean-cut surface of the Femur and the side of the pelvis, or the end of the Femur will be sustained in or near its original position by firm fibrous structures that form around it. Under such circumstances the patient has preserved to him a useful and painless limb.

"It is a rule in Surgery," says Mr. Reichler, "that whenever a patient's strength is being worn out by the hectic consequent upon suppuration resulting from carious bone, the cause of the constitutional disturbance, the diseased osseous tissue, should, if possible, be removed. It is, therefore, as much in accordance with sound surgery to remove the carious head of the thigh bone, when its presence is threatening the patients life, as it is to amputate for caries of the tarsal bone, or to excise a diseased elbow under similar circumstances."

The conditions that contra-indicate resection of the ileo-femoral articulation are, extensive disease of the pelvic bones, and bad fractures of them, complicating with them injury to the great vessels and nerves going to the limb below. It should be always borne in mind that resection for the removal of disease of this articulation would not be justifiable, unless after due investigation and consideration of the case, the patient's life was thought to be in danger from the irritation and suppuration kept up by the presence of the carious head of the femur. Every practitioner is familiar with cases of hip disease that have recovered spontaneously, or under judicious management,—sometimes with ankylosis, at others with a limited movement retained. To have resected the head of the bone under such circumstances, would have subjected the patient's life to unnecessary risk; and with the most favorable results the limb generally would not be more useful than when it recovered without an operation. In some cases it is difficult to tell whether the Femur alone, the cotyloid borders, or both, are diseased in a given case. Generally the cases are more favorable when the Femur alone is carious, yet they have done well when the head of the Femur and the cotyloid borders have been removed in an operation.

The resection of the articulation may be performed by making a longitudinal, semilunar, or crucial incsision over the great trochanter at the outer or posterior side of the joint. This may be done without any danger to the great vessels and nerves, and sufficiently expose the parts to be excised. The head of the bone is then to be thrust out of the wound by rotating the knee inwards, and removed with an ordinary saw. A single incision extending four inches, beginning at a point below and behind the anterior superior spinous process of the illium, and ending behind the great trochanter, will allow the head of the bone to be forced out of the wound and removed. But it does not afford room to examine the cotyloid cavity, and remove it with gouge-forceps when necessary. The after treatment consists in keeping the patient in the horizontal position for a few weeks, with a long splint extending from the foot to the arm-pit, upon the side of the limb and body. The splint should be connected in the middle with an arched piece of iron, to carry it away from the hip. The splint also should be well padded where it bears upon the skin. Care must be exercised in the treatment of the wound, that the fluids have free escape. To be sure of accomplishing this, the limb should be elevated during the process of the cure.

The success of the operation is such as to warrant its performance in proper cases. Over one half the cases in civil practice have resulted favorably. In military surgery the success is not so flattering, yet the cases of *amptation* at the hip are almost always fatal. In the late Crimean war there were ten cases of amputation at the hip joint without a single recovery. In the Schleswig Holstein war there was but one recovery out of seven hip-joint amputations. But it is well known that military surgery is not as successful as that in private practice. The mental condition of a wounded soldier is unfavorable to a recovery, though Baron Larrey seems to have been particularly fortunate with many of his cases.

In civil practice the hip joint has been resected about seventy times, with about forty cases of recovery. In many instances the patients were considered in a hopeless condition when the operation was performed, therefore all the unsuccessful cases should not be put down against the operation. It is less fatal in its results than amputation at the same joint, though from the meagre accounts of the operations performed no correct analysis of its advantages can be given.

QUERIES ANSWERED—PARALYSIS.

Case First.—"I have a remarkable case of paralysis which has baffled the skill of several physicians. The patient is a Mr. Carsons, who was knocked from his horse by the falling of a tree about a year ago, and in the event he received an injury to the spinal cord which so affected the nervous structure that the left arm and legs have been paralyzed ever since. The tree hit Mr. Carsons in the side and back at a point corresponding with the inferior ribs, while he was leaning forward in his saddle to escape the falling body. The physician called bled him on the spot, and then had him removed home. His bruises were treated in the ordinary way, and after some days, Strychnia, Nux Vomica and the

Iodide of Iron were administered internally. The treatment thus far did no apparent good, and bed sores formed in the sacral region, to complicate the difficulty. Under such circumstances I took the patient and succeeded in curing the bed sores, and getting him out to exercise· but since August last no considerable change for the better has occured, He can drag his legs clumsily along, by resting a great part of his weight upon a strong servant, and can steady himself on a gentle horse. His bowels are generally constipated, yet his appetite is pretty good. I have now mentioned the prominent symptoms and circumstances in the case. He had however, for some time attacks of a convulsive nature while asleep or lying down, when he seemed to experience a great difficulty in breathing. Many times these amounted to almost complete suffocation. Such attacks have now nearly subsided.

Please give your idea of this case, and a plan of treatment through the Journal."

Note.—The functions of the genito-urinary organs ought to have been given.

Answen.—In this case if there was no fracture of the vertebræ, and compression of the spinal cord by displacement of the fragments, there is evidently compression from some other source. It may arise from extravastion of blood into the medullary canal, or within the medullary structure itself. Or the compression may have arisen from effusions of exudation produced by inflammation of the meninges or coverings of the cord. In such cases it is exceedingly difficult sometimes to determine what is the pathological condition.

An individual will receive an injury in the back from a blow or fall, and paralysis follow it, and subsequently death. If afterwards the encephalon and medulla spinalis be examined, frequently no lesion is discovered in these structures. In such cases death results from concussion, there being no structural change, except it be of a molicular character, and therefore not apparent. Function alone seems to be disturbed. These cases, however, are by no means frequent, more often there are extravasations of blood and effusions of lymph and serum. These accumulations will produce paralysis of parts of the spinal cord, or of its entire structures. The anterior portion of the cord may be pressed upon, producing loss of motion, or of the posterior portion, causing loss of sensation, or of the entire cord, ensuring complete paralysis not only of motion, and sensation, but of the secretory functions. The effects are, impeded respiration, inability to control the parts which receive the nerves that arise from the cord below the point effected. The bowels are constipated from a paralyzed state of the muscular fibres that enter into their structures. Though these fibres do not receive nerve filaments from the cerebro-spinal axis, when that system is injured the splanchnic system suffers from its intimate connections with it. In the same way the functions of the genito-urinary organs become involved in the difficulty. In the treatment of a severe case of spinal or medullary compression, all these organs should receive proper attention. The bowels must be moved by the use of active cathartics; the kidneys must be stimulated by the use of the balsams and the terebinthinates; and care must be exercised or the bladder will become so distended before the patient complains of any uneasiness, that it will either burst or distend to a dangerous degree. Care must be also exercised to prevent the formation of bed-sores, which might seriously complicate the difficulties, and turn the probabilities of the case against the patient.

In the case under consideration, advantage might probably be derived from the use of revellents along the back. The Liquor ammoniæ applied on each side of the spine with a flannel swob for five or six minutes, and repeated in a few days afterwards, would be advisable. This will produce slight vesication, and much relief may be expected from it in many cases. Douches of cold water twice a day might have a beneficial effect. This intermittent application of stimulants and irritants will often effect more than such agents continuously applied, as the system becomes used to them after a little while, and they lose their efficacy. On this account moxæ are frequently preferable to setons. A simple galvanic apparatus should be tried alone or in connection with the above. One could be made of two zinc plates fashioned like the sole of the shoe, and applied to the bottoms of the feet, being connected with a copper plate placed on the back of the neck, by means of tinsel cord or common wire. This could be worn for a few hours every day, and good results ought to be derived from its use. Officinal or proper doses of *Veratria* seem to be indicated, and other active nerve stimulants. Let friction be applied often to the body of the patient with strong hands covered with hair gloves. Such treatment seemingly can not fail to produce desirable results. Move the bowels every two days with a combination of podophillin, capsicum, and sulphur; and the kidneys should be stimulated, if they are inactive.

Case Second.—"My patient is a lad ten years of age, of a scrofulous diathesis. Early last Autumn he injured the plantar nerves of one foot by stepping on a nail which punctured the skin and fascia of the sole of the foot. Violent pain soon followed in the limb, and the parents gave a dose of laudanum, and drew a blister over the part injured as well as on the ankle. In two weeks as the lad did not get along well, I was called to treat the case. I gave repeated doses of Nux Vomica tincture, and brought to bear upon the limb, electro magnetism, and applied stimulating linaments, with friction over the surface of the entire limb. Under the influence of this treatment the patient improved slowly; and from a state of helplessness can now walk without aid; yet he has a very ungraceful swinging movement of the limb, with a tendency to drag it while walking. The limb has wasted somewhat, and the muscles are flaccid. Will you throw some light upon this case, and advise a course of treatment, in the next issue of the JOURNAL, as it does not recover rapidly enough to suit me."

ANSWER.—The wound caused by the nail puncture gave the nerves a shock that they did not recover from, and partial paralysis succeeded. It often happens in analagous cases that some portion of the spinal cord, or its covering, take on diseased action which becomes the continuous cause of the paralytic state. A diagnosis of this condition can best be formed by applying electro galvanism along the spine. If there be any diseased point it will be revealed by the painful sensation produced by this agent.

The nutrition of a part always suffers more or less when the nerves are affected with paralysis. And in most cases when this condition is established it is likely to remain. There is also danger as the leg is supplied with nerves arising from different points along the spinal cord, that the equilibrium of the muscular forces be destroyed, and that the limb become turned in or out, as it does in a common case of club-foot.

Some cases of partial paralysis are exceedingly difficult to understand, as was remarked in the answer to a previous query. When dissected they present no morbid appearances, yet some inappreciable change must have taken place in the neurine of the nervous centres, or of the extremities of the nerves themselves. When a child is growing there often exists an unequal distribution of the vital forces, which disappears later in life.

The treatment in this case seems to have been judicious. The application of galvanism as recommended in an answer to the previous query, might prove more serviceable than applied as it usually is. Stimulating linaments of a permanent character would be advisable. Let one be used which may be composed of the oils of Horsemint and Oraganum, and the tinctures of Capsicum and Nux Vomica, and applied three times a day with friction. If the spinal cord or its coverings be diseased, revellents should be resorted to. Internal remedies often do more mischief than good by disturbing the digestive functions. Yet such constitutional treatment should be adopted as will be likely to keep the body in a healthy condition. The natural recuperative powers of the system often prove competent to overcome cases of partial paralysis. Strychnia and veratria have produced the most decided effect, yet these agents often fail to answer any good purpose. Exercise and cold douches seem to accomplish something desirable in every case of partial paralysis, especially in young subjects. The intermittent application of mustard and horseradish to the affected limb could not fail to exercise a beneficial influence. The endermic application of strychnia should be used before the case be abandoned to the vital effect alone.

PERIODICITY OF DISEASE, A UNIVERSAL LAW OF DISORDERED ACTION,

BY J. EMERSON KENT A. M. M. D.

The following, from a Worcester (Mass.) paper is worthy of more than a passing notice: "We understand that a Miss Read, residing in West Boylston, applied to a Dentist, to have a tooth extracted, two weeks since. The Dentist administered chloroform, and immediately after her tooth was extracted, the young lady was attacked with a violent pain in the head, which deprived her of reason. Her friends carried her home, and in the evening she apparently died. She was laid out for burial, when, after some time, she revived. What is most remarkable in the case, is, *that every evening about seven o'clock she swoons* AFTER suffering the most excruciating agony."

To the Believer in the periodicity of Disease the case presents nothing *remarkable*; for the repetition of the paroxysmal attack [to which the young lady was subjected] is only additional evidence of the great truth first announced by the Author of "The Fallacies of the Faculty," in the year 1836, "that all disease is intermittent (or remittent) and periodic."

If we had the whole of the facts in the above very interesting case, we have no doubt we should find that this lady was subjected to the administration of chloroform in the early part of the day: that the "violent pain in the head, which deprived her of reason," continued until about seven o'clock in the evening, when she swooned, or "apparently died." In this state she was prepared for burial, but, as reaction progressed, she "came to," to be again and again subjected to a repetition of the cerebral paroxysm of the preceding day, terminating by a repetition of the "swoon," or fainting, simulating death.

Says Dickson:—"We have seen the *periodic* order of the living body of man in his health, the *periodic* order, also of its organic and other movements, minor as well as major. I have now to speak *of the periodic* order of its disorder; for in disease, as in health, the body is a *repeater*. This phenomenon of repetition may be observed in ALL diseases, whatever their cause," and the observation of every intelligent practitioner bears witness to the truth of this great announcement. *Intermission* is the character of disease by whatever name called, and *paroxysmal repetition* is as invariably manifested. Who has not seen the law of periodic intermission, as manifested in that but too well known disease, consumption? the *better* and *worse* days of the patient, and the uniformly better and worse periods of the same day? In all cerebral disorders, so long as the sentient vitality of the system remains intact, the remissions are distinctly marked; and in dropsy of the brain, the eminent Watson, of London, acknowledges the existence of the periodic intermissions, which, however, he ignorantly describes as "appearances so deceptive to the inexperienced." Who has not marked the periodic paroxysms of tic douloureux, rheumatism, erysipelas &c.? and it is now almost universally admitted that insanity manifests periodic paroxysmal repetitions, the fits occurring with a uniformity in time and duration so perfect as to lead at once to the recognition of the great law of the unity of all disordered action.

Ignorance of or inattention to the primary law of *all* disease, is the cause of the perpetuation, from day to day, of sufferings such as are described in the case narrated in the opening of these remarks; and the same remark holds good in relation to the continued and prolonged repetition of the paroxysms of every manifestation of disordered action. It is because the Believer in the periodicity of Disease "keeps paroxysm and remission constantly before him, that he so greatly shortens the duration of disease, and in the same proportion reduces the sufferings of the patient"; and had we been in attendance on Miss Read, I hazard nothing when I assert that her regular seven o'clock paroxysms would have been promptly controlled or averted. The exhibition of a full anti-periodic a couple of hours before the occurrence of the paroxysmal period, would have prolonged the intermission beyond the repetitive accession, and the patient would have been saved from the most "excruciating pains in the head," and the subsequent swoonings described as occurring so remarkably "every evening about seven o'clock." Truly has it been written, "men have eyes, but they see not." The slaves of authorities and early prejudices, the faculty which alone claims to be "regular" will not look truth, however palpable, in the face, if it conflicts with their pre-conceived notions, or the dogmas of the schools.

To illustrate the success which characterizes the advocates of the "Periodic Doctrine," the annexed cases are transcribed from my note-book; they widely differ in their several manifestations of syptoms, and in their nosological appellations; but in one thing they all agree, they furnish undisputable evidence of the truth that ALL disease is intermittent and periodic.

1st. Mrs. Nancy S., of Central Falls, had been out of health upwards of a year, with symptoms as follows: habitual constipation; uterine secretion defective, and attended with sharp lumbar pains; hands and feet cold; appetite poor; digestion imperfectly performed; nights restless and unrefreshing; had for months a severe head ache occurring daily, commencing about seven o'clock,and continuing nearly three hours; frequent chills and hot flashes, the chill which preceded the morning headache very severe; frequent pains in the temples, and shooting pains through the eyeballs. Nine weeks before I was called in, she experienced a pain more than usually distressing in her eyes, and upon the subsidence of the acute pain, she squinted. Within a few hours she saw all objects multiplied and distorted. For this new and distressing disturbance she consulted seven of our "allopathic physicians," without obtaining any relief. She then placed herself under the care of Dr. Barrows, at one time an allopathist, but for some twelve years a Homœopathist, continuing his treatment upwards of six weeks. The case still becoming worse, I was called, and put the patient under the following treatment: A full anti-periodic an hour before the morning paroxysm, with Hyosciamine and Zinci Valerianatis an hour before bed-time. Thrice daily she took Quinia, Ferri citratis and Podophyllin, alternating with Quinia, Hydrocyanicum acidum, and Menisperine. The repetitional symptoms yielded on the fourth day, and on the twenty-first day she had the joy of again seeing everything naturally, with a return of health to which she had been a stranger for years. Years have passed, but she has had no relapse.

2nd. Samuel H——, consulted me for the relief of a spasmodic and suffocative attack, to which he had been subjected for twelve years, during which time he had been under the treatment of every physician in this city, with a single exception. The attacks, which had always been called epileptic, had become diurnal, and so severe as to prostrate him at once, throwing him senseless upon the place where a few moments before he was standing at work. His general health was much impaired

I gave him a full anti-periodic an hour before the morning paroxysmal period, and, to use his own words, he "escaped his tormentor for the first day in long tedious years." The anti-periodics were continued, conjoined with Piperine, Viburine, Leptandrin, Hydrocyanicum acidum, Quinia, and Iron, and in the course of six weeks he was perfectly well. Six years have passed away without any return of his old annoyances.

3rd. Stephen E——, Esq., of Valley Falls, consulted me in relation to the treatment of a chronic diarrhœa, to which he had been subjected for three years, inducing great debility and prostration. He had had ample old school attendance, and had also been under the professional cares of an eminent New York practitioner. His last medical attendant declared that "he would never be better, unless he took calomel enough to completely change the mucous surface of his bowels." The paroxysmal period occurred after sunset, and between bed time and morning he frequently had to rise from twelve to twenty times, often sitting upon the night-chair a couple of hours continuously. From long loss of sleep he was greatly worn down, and exceedingly nervous and irritable. I commenced his treatment confident of affording him the long but vainly sought relief. I gave him anti-periodics of Quinia and Cypripedin, to be taken a couple hours before bed time, and in connection therewith he took at intervals of four hours through the day, a combination of Rhusin, Leptandrin, Quinia and Menisperine, alternating with Hydrocyanicum Acidum, Iron and Strychnia, (in 64th of grain doses.) In the course of a few weeks he was well, but lacking strength, to attain which, he travelled. After taking the first anti-periodic he had no occasion to leave his bed during the night, and in the subsequent forty-eight hours he had only three discharges. Although I wholly changed his diet from gruels, farina, etc., to substantial and nutritive food, (beefsteak, oysters, etc., with good wine) not once during my attendance did he suffer a relapse, and three years have passed without either a relapse of the disease, or the occurrence of any other sickness.

4th, William W——, consulted me in relation to the health of a little daughter aged about five years. She had some months prior, a severe attack of lung fever, after the subsidence of which her health remained poor. About four weeks before I was called in, the mother noticed an occasional blindness on the child, and soon afterwards she observed a marked squint in each eye which rapidly became worse. At first the squint was only a few minutes in duration, but it had at length continued for hours, and was always preceded by the "spell of blindness." The little one's general health was poor, and her nights were restless, she was pale-faced and much wasted in flesh. Upon my inquiring if the child squinted all the day after its first appearance, the mother answered "Oh no, she only squints at times." I prepared an anti-periodic, directing one to be given an hour before the spell of blindness, conjoined with an hæmatic intermittent, to be given at intervals of two hours, when the squint was not observed. On the fourth day the blindness and strabismus wholly disappeared, and at the end of the fourth week, the child having fully recovered health, all treatment was suspended. Six years have elapsed, without the least return of the symptoms, and the child is now a handsome and robust girl.

5th. Henry M———, had been subjected to epistaxis for nearly four years. The attacks had gradually increased in frequency, until they had become repeated every alternate day, and the hemorrhage had become so profuse as to render the patient anæmic. His general health was miserable, he had no appetite, bowels constipated, nights almost sleepless, with intolerable nervousness, and he was "weak as a rag." He had been repeatedly bled, leeched, and cupped to overcome *the so-called rush of blood to the head*, but without the least advantage. He had chills and hot flashes, with cold sweats often repeated on the day of the paroxysms, and was completely discouraged. Assuring him of a restoration to health and strength. I put him under the use of Ferri citratis, Quinia, and Leptandrin on the days of intermission, with Cypripedin and Viburine at bed-time, and early in the morning of the paroxysmal day, he took Quinia and Piperine, at intervals of one hour, so long as the hemorrhage was averted. During twelve days the epistaxis was repeated, but it commenced at a later hour each day, and with each repetition its quantity was greatly reduced. On the fourteenth day (the seventh repetitive period) it had wholly disappeared nor had he any chills, flashes of heat or sweats on that day. From this time his recovery was rapid; his appetite had become good, bowels regular, and he slept well. With generous diet he gained strength and muscular vigor, and at the end of a month his exsanguinious appearance had become changed into the warm hue of health. His treatment was continued through another month, when all remedies were laid aside. From that time to the present, a period of nearly five years he has enjoyed uninterrupted health, without a single return of his old and prostrating attacks.

I might multiply these illustrations of the great truth which has already made Dickson's name as illustrious as the name of Harvey, Jenner, or Pare, but I forbear. Every new development of disease I am called upon to treat, is only an additional witness to the truth of the doctrine of the *unity* of every disorded action, as manifested by the *Intermittency*, and *Periodicity* of all disease. In future articles I may more fully develope this beautiful, harmonious, and philosophical doctrine, by the narration of yet more numerous and apparently opposite cases, cases of actual occurrence in the field of my own practice, a doctrine already admitted by the most eminent men of all nations to be the basis of all true practice, a doctrine which in the language of Sir John Forbes, (in the British and Foreign Medical Review) "must be understood, before any physician can practice medicine scientifically."

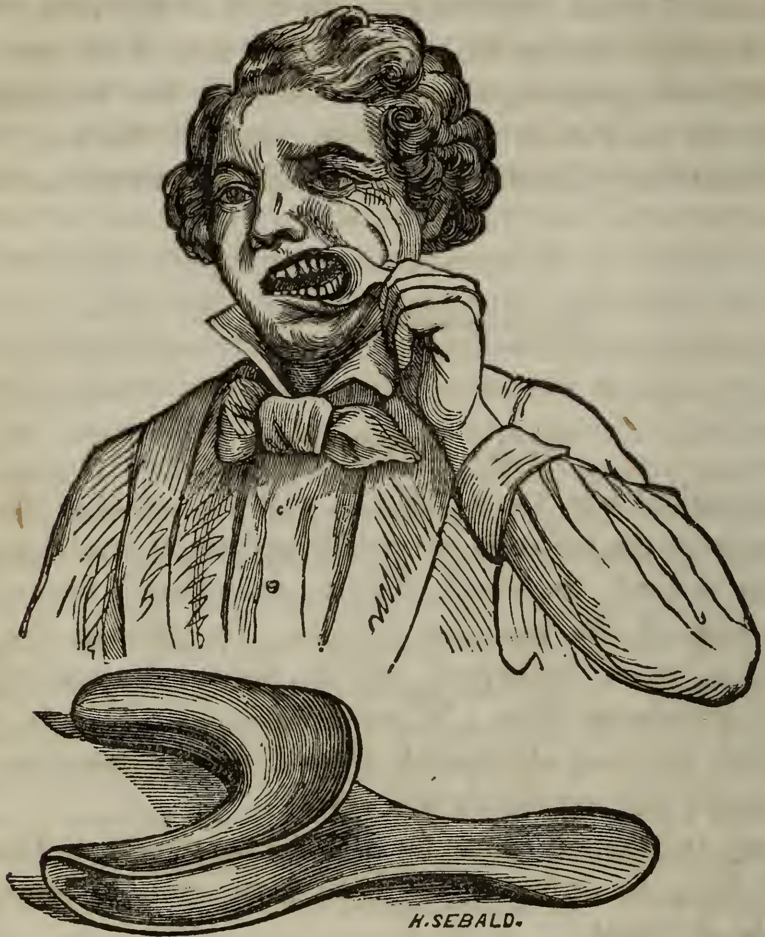
ORAL SPECULUM.

"I have a patient who has a difficulty with the outlet of the Salivary duct. Sometimes the saliva is not discharged for several days, and the accumulation distends the cheek, forming an inflamed tumor just over the anterior edge of the masseter muscle. By probing the orifice of the duct, the saliva is discharged, and the patient is apparently free of the difficulty for several days. What I most fear is that sometime when the duct becomes obstructed, ulceration will form an opening externally, and a salivary fistula will result.

Is there any instrument in use for dilating the mouth, as I have much trouble in finding the orifice of the Stenonian duct. I hope to see an answer in the JOURNAL."

Your patient has a strictured condition of the Stenonian duct, which is likely to terminate in a salivary fistula, and is generally intractable unless properly treated. Daily dilitation for a few weeks with a common silver prob, or small bougie, might overcome the difficulty. If a preternatural opening forms in the cheek from ulceration constituting what is ordinarily called salivary fistula, it may be cured by perforating the cheek just anterior to the masseter muscle with a common saddler's punch, and then closing up the external opening with sutures and plasters, which will compel the saliva to be discharged from the duct through the inner part of the punch-hole into the mouth. The freshly cut opening will, in a few days, take on all the functions of a natural duct, and the external opening will readily unite.

To distend the side of the mouth and cheek and expose the orifice of the stenonian duct for the purpose of probing it an oral speculum may be used, which is a very convenient instrument for examining the inside of the cheeks, teeth and gums, on any occasion.



The above cut represents the mouth distender, or oral speculum, and the patient holding an instrument in his mouth. This he can do while a trivial operation is being performed. The speculum is commonly made Brittania metal, and consequently be afforded at a small price. Every physician would find it to his advantage to possess one.

A similar instrument, but made of prepared India rubber has lately been introduced to the Dental profession, by Dr. C. H. Jenks of Worcester, Mass. It is preferrable to the metallic one as it has no unpleasant taste, is lighter, and has in addition a cushion of soft India Rubber, or cork, for the purpose of making it self-holding. This cushion can be removed at will.

SALIVATION—MERCURIALS.

BY THEODORE C. MILLER, M. D.

Ptyalism, or an increased flow of the juices of the mouth indicates either a local irritation of the salivary glands, as in Argina parotidia; or a secondary effect from disease of the abdominal organs, and particularly of the stomach, as from the presence of worms; or chronic diseases of the pancreas, the stomach, liver, etc; or congestion of blood in the region of the salivary glands, as in apoplectic patients. In cases of the suppression of other secretions, as perspiration, for instance, or in lingering typhoid fevers, or measles, or miasmatic disease, ptyalism is often present.

We often observe profuse expectoration as a symptom in hypochondria, or torpidity of the abdominal vicera, and then it is very hard to cure.

In some of these cases the abdomen feels hard like a plank, but with no local pain on even very severe pressure. In some of these cases, the most powerful drastic purga'ives are not able to cause any fœcal evacuation.

This salivation will continue as long as the torpidity continues, and will pass away as the bowels become soluble, and at times disappears as the torpidity is entirely removed. The torpidity, also, sometimes causes vomiting, even when there are no indications of the stomach being directly involved in the torpidity.

To cure these cases, we have to give our agents a long tim^. We may use the Extracts of Saponaria, Taraxicum, Chelodonia. Baptisia tinctora, Corydalis formosa, Hydrastis, Iris versicolor, Leptandrin, etc. Podophyllin, in these cases is contraindicated, as it increases the torpidity and the salivation.

Salivation is caused artificially by the use of cinnamon, ginger, pepper, opium, kermes mineral, conium, podophyllum, but more particularly podophyllin, and the various preparations, of mercury, sugar of lead, and sometimes by the different preparations of iodine and gold, or smoking or chewing tobacco.

It is also caused by diseases of the mouth or throat, or imperfections of the teeth, or from local excitement at the period of dentition, the appearance of the menses, or pregnancy in women, or approach of puberty in boys, or taking cold, or a suppression of the excretion of urine.

As there are such various causes for salivation, it becomes important to know how to determine when it is caused by mercury in the system. This can be determined by taking some of the saliva and boiling it with a little Nitric acid and filter it, and then add dilute Hydrothionic acid (aqua hydrothionica) and heat to boiling. After a short time it turns yellowish, and then black, throwing down a sediment of Sulphuret of mercury.

In the saliva in health there is always the sulphuret of the cyanide of potassa upon which the chloride of iron acts as a strong reagent, and by the addition of a solution of the chloride of iron there is produced a blood-red color. If this blood-red color is not produced, there is none of the sulphuret of the cyanide of potassa, and then the salivation is caused by the action of mercury.

The *Blue Pills*, or as my friend Charles Meyer calls them, the "Wunderpillen of the old school practitioners," are considered by most, the mildest among the mercurials. According to my own observation they have a *peculiar* pernicious influence on the human system. I have frequently observed that after the short use of this so-called mild preparation, particularly after exposures to the weather, the patient complains of debility, chills, the pulse is increased in frequency, the tongue is furred, there is great inclination to profuse perspiration, the skin is easily affected, and the person readily "takes a cold." At the same time there is a feeling of oppression at the stomach, nausea, sometimes vomiting, cholic and diarrhœa. These pills also often cause a mercurial rheumatism Those who use these pills require great care against exposure, and the suffering caused by exposure instead of being attributed to the true cause, is said to be produced by the hurtful influence of the weather. There is also at times tremors, and after a time mercurial ulcers, particularly with those who have had syphilis, as has been noticed by most writers on syphilis; as well as periostitis from the mineral.

The case which Dr. H. B. Brown mentioned in the College Journal of last October, is a disease caused by Blue Pills, and is in accordance with what I have here stated. Even the slightest use of these pills may cause after a length of time, an undermining of the general health, indigestion, constipation, and enlargement of the spleen. I have not the least doubt that the liver is also congested. I would refer Dr. Brown and others to what Dick, Saunders, Chlyne, Nicol, and others say in reference to affections of the liver produced by mercurials.

Graves has frequently observed hypertrophy of the liver from this cause. It is well known that Chapman often referred to the same.

In Dr. Brown's case, I would advise an antimercurial course of treatment. I would give first the Compound Syrup of Stillingia of King's Dispensatory, combined with small doses of Iodide of Potassium; and also use injections. If marked improvement did not occur in two or three weeks, I would advise the Iodide of Iron, recently prepared and dissolved in pure wine, if that was obtainable.

The diet must be entirely animal, as any addition of starch would destroy the beneficial effects of the iodine, and without a strict adherence to this rule, no benefit can be expected. A little bread is all that can be allowed, and that but once a day.

CALCULI—BILLIARY. (?)

BY L. A. MARKHAM, M. D.

Mrs. B. was attacked with violent pains in the region of the stomach and bowels on the 24th day of December last, and continued to grow worse during the day and night, until near the morning of the 25th, when she passed through her bowels two stones of a light brown color, which were as smooth as marble. One of them was about an inch in diameter, eight sided, and an inch and a quarter from angle to angle. The other was some smaller, and three sided.

Remarks.—It is by no means unusual to observe a consolidation of some of the elements of the bile in the gall-bladder, and an escape of these calculi or concretions through the ductus communis choledochus into the alimentary canal. During their passage, they may cause very violent pain in the epigastric region, which the patient may locate in the stomach. If the calculi remains in the duct long, stopping the flow of bile, the cyst will become distended and it and the liver inflamed and very painful, and the whole system jaundiced by the absorption of bile into the lymphatics. The pain is likely to be somewhat paroxysmal.

The billiary calculi, being formed in fluid, are nearly always smooth and polished on the surface. The angular form is owing to the one being pressed upon by the other. Sometimes they are round, or ovoid.

Usually there are many formed, and as the duct is of small calibre, they may be retained a long time, and voided with difficulty and a few at a time. But the duct, being elastic may be enormously distended, and very large calculi have been known to pass through it, and afterwards escape at the rectum. These calculi are often found in the gall-cyst on postmortem examination, when none had been suspected during life.

VENESECTION.

BY J. G. RADEMACHER, M. D.

[Translated from the German, by Lewis E. Miller, M. D.]

The following is the result of observation and experience. If a healthy person loses blood, the effect is obvious and pernicious. If the bleeding is not copious or often repeated, the feeling of debility which follows the hemorrhage disappears somewhat quickly. The weakness produced by a copious loss of blood is not readily recovered from, and is cured by restoring to the system the iron and other elements which it has lost in the bleeding. A severe loss of blood cannot be remedied under a considerable time, except by transfusion, as time is required to fit the elements to replace those which are lost.

Many extol venesection in the highest terms, because of the immediate relief to pain which it gives, and therefore it is thought to be a remedy in most diseases. This idea of relieving the pain, and the idea of curing disease are evidently confounded very often by many physicians.

I will endeavor to show what is the result produced by venesection in diseases that manifest themselves as an acute Fever or an acute Inflammation. It always seemed strange to me in my youth that in Pleurisy, during, or directly after a bleeding, the pain in the thorax was removed, that in a half a day, and sometimes sooner, it should return again with as great or greater violence than at first. This proved to me that the evacuation of the blood could not have effected *by its evacuation* the great ease from pain, because the lost blood could not be restored again thus quickly. The relief, if produced by the simple loss of blood, must have been of longer continuance.

The permanent injury to health produced by venesection, led me to investigate this matter more closely, and I have learned some of the uncertainties as well as disadvantages of blood-letting.

In certain forms of pleurisy, a single bleeding will relieve the pain in the side, but as the pleurisy is owing, in part at least, to derangement and debility of the entire system, which debility is much agravated by the blood-letting, a single, even moderate venesection may so enfeeble the patient as to produce delirium and death ; and the death may occur very suddenly, as it very often does in those cases.

In diseases of the organs, in many cases the effects of repeated venesection is very fatal, as is the case in pleurisy, or diseases of the liver. Even when the pain is relieved by bleeding, the organ remains diseased, but that disease may assume a chronic form, which it is more difficult to remove than the primary one. I see each year, such changes wrought in diseased organs, and cannot be under an error in regard to this matter.

When I consider how very illusory and deceptive are the apparently good effects of venesection in many cases; how the physician, thinking only of the relief from pain produced by bleeding, are inclined to conclude from that alone, that it is beneficial; and when I farther consider in how many cases this is resorted to without any relief, but with markedly hurtful results, I am led to be astonished at the conclusions arrived at by many.

"A full strong pulse" has hurried many patients to an untimely grave. Those physicians who see only the present relief which follows venesection, never discover the hosts of victims that it has destroyed. Such physicians as have from habit, taken to bleeding as a second nature like leeches, attribute the bad results that follow their practice to the most improbable causes rather than admit their own favorite practice is erroneous.

LIVER COMPLAINT—CAUSES OF.

BY J. E. SPENCER, M. D.

The community in which I practice abounds with diseases of the Liver. Yet certainly there is no local cause for this or any other disease, for the country is rolling and rocky, with an abundance of the purest clearest and softest water that ever I saw, no low or marshy grounds, no dead or stagnant ponds, or lakes,—but water, clear, limped and rapid; therefore we must look to some other cause for the malady.

The most probable cause which I can assign, is the habitual use of swines flesh. I am strongly inclined to the opinion that the effete particles contained in all greasy or fat pork are lodged in the liver, for it is well known the venous or black blood from all parts of the body charged with impurities, waste matter, and effete particles, passes to the lungs for purification. It is also known that a portion of this blood is sent through the liver. This fact proves that the liver has much to do in relieving the blood of some of its useless and poisonous elements.

If the food taken into the system is impure, improper, or unnatural, the blood must become loaded with a greater amount of gross matter than the various secretory organs can separate without their action being preternaturally increased or augmented. And again, the situation of the liver in relation to the venous circulation at once manifests its great liability to be more readily sur-charged with the floating impurities of the mass of blood than any other organ.

Experiment is also a valuable teacher. I was for many years much troubled with a torpid condition of the liver, but a little Blue Mass, would soon set it right (as I supposed) till at last acute inflammation succeeded, which led me to not only change my practice from old school to Botanic and from thence to Eclectic, but also my regimen, from pork to beef, and from beef to chicken, and from chicken to a strictly vegetable diet. From which time I have had no liver complaint, no pains or aches, except from fatigue, etc. It is about six years since I commenced abstaining from meat, and for the last two years have not taken one ounce of any kind of flesh, and have enjoyed perfect health without taking a single dose of medicine.

TIC DOLOREUX.

BY PROF. CLEAVELAND.

Although this is a very common affliction, and of a region whose surface is readily approachable by our remedies ; yet our patients continue to suffer the most intolerable plunging, digging, twitching, darting pain, under the eye, over and across the forehead, in front of and around the ear, and down the neck, and at the root of the tongue, in spite of the course pursued by many.

Tonics, iron, a blister behind the ear, and on the back of the neck, drastic purgatives, emetics, opium internally and externally, the use of veratria and morphia, applied locally, in solution or by innoculation ; chloroform, and tincture of aconite root, applied to the part afflicted, together with the application of galvanism, and even destruction of the nervous connection by a surgical operation, have each been tried and lauded. Recently the valerianate of ammonia, in large doses has been highly extolled, either given alone, or with plenty of quinia. These medicines have proved beneficial, but I have found more relief follow the use of an infusion of the flowers of the arnica montana, in which was dissolved the cyanuret of potassa, both internally and externally. The tincture of belladonna and origanum applied externally, has given almost instantaneous relief.

EDITORIAL DEPARTMENT.

PROGRESS.

The whole world tends to progression, advancement, and the evidence of this fact is to be found every where and at all times, both in the material and the intellectual world. Where there is nothing *added*, there is in its place a wonderful *diffusion*, which probably often is the greater present benefit to the race.

While the toil of man has been subduing new countries and even continents, and making the wilderness to be changed to cultivated fields and blooming and beautiful gardens and happy homes, either strung together with the net-works of highways and canals and rail roads, or clustered in hamlets and villages and towns and cities, the intellectual progress has kept at least even pace with the physical, and has planted in each hamlet its school, each village its churches, and in the towns and cities schools and churches and Colleges and Universities and other instrumentalities, that the highest demands of the most progressive minds might be satisfied.

And while the people have not felt their their physical wants were all supplied by comfortable homes, but have provided moveable palaces to go upon the waters and gorgeous cars upon the rail track, they have also demanded for their intellectual wants similar accommodations. And hence the daily and weekly papers, the monthly and quarterly Magazines with their store of intellectual matter, which are carried to every household, quickly disseminating the thoughts and the discoveries of each person to the homes of all.

The appliances which are so prized in other walks of life are by no means denied to the members of the medical profession. We have our little storehouses of the professional knowledge of the world in our office and our public libraies. We have our schools, where the one or the few pupils avail themselves of those libraries and the personal instruction of those who own them or have them in charge, as well as in the broad fields, and the bedside of the sick. We also have the Hospitals, which are schools for physicians as well as places of refuge for the diseased; and we have a large number of Colleges in whose Halls are taught medicine and its collateral sciences by a number of as able and experienced teachers as devote themselves to any other department of intellectual culture; and we have Journals and Magazines, more or less under the contol and guidance of these professional teachers, which garner up the thoughts and the experience of the whole world, past and present, and for a merely nominal sum carry their precious freight to all such as contribute their mite toward this wonderful *diffusion*, as well as collection of professional knowledge and wisdom, which leaves our own chosen calling and its votaries no way behind the intellect of the age in the race of progression.

We have been, and still are, in America, somewhat peculiarly situated; and hence we have and do occupy a position which has not always been fully understood. We have been called upon to exterminate the savage beast, to battle with the lurking Indian, to cut down the primeval forest, to open the wilderness for a home, to protect our firesides, to train domestic animials, with but little time to study metaphysics or fine-drawn hypotheses.

The Indian warfare, the field of timber, the log-hut, and even the log school-house are not favorable for training dreamers to think and talk abstractions and idle speculations. The archives of the swamps doubtless preserve many valuable records of the past, but while they send forth their death-dealing exhalations and harbor the savage beast, or venomous serpents, or noisome reptile, they are not exactly the field for the industry of the antiquarian or the philosophical historian.

The early pioneer in our profession as well as in other walks of life was *compelled* by circumstances which he could not control—circumstances backed and supported by the strength of nature past and present, to hold the rifle and the axe in his hand in place of the volume of the philosopher, and to have at his side the powder horn and bullet pouch in place of the Lexicon. And even as these earlier difficulties were subdued, and the life-long labors of the pioneer was rewarded with a fair amount of prosperity and ease, local and social requirements have taken much of the time of the physician, so that those publications which give an *abstract* of long articles, or the *conclusions* of arguments developed in lengthy discussions are justly prized, as true and genuine aids of great value in assisting proper diffusion and progression in the profession.

But to aid true and genuine progression, medical publications must be more than mere copyists of medical books and of each other. Too many of these are simply *receptive*, and frequently of the twenty or thirty papers which a medical Journal contains, not a single new idea can be gleaned, or a single old idea presented in new and improved language.

At the present time when Botany, Chemistry, Zoology, and all the sciences allied to the Medical Science are making the most rapid progressive strides, many conductors of the medical press, with a wonderful want of manly independance, are actually *afraid* to give utterance to any ideas not sanctioned by antiquity. *Such* medical priodicals do all that lies within their little power to stem the tide of progress, but in spite of their foolish and puny efforts the world still moves, and each month, and even each day, furnishes ample proof that in the medical, equally as in the other sciences, there is always and at all times hopeful and ample evidences of PROGRESSION.

This fact might be proved by referece to every day's history, as well as by the sometimes forced admissions of even the most conservative of the fogy members of the profession; but a proposition so entirly self-evident, requires no effort for its establishment and therefore none will be made further than a comparison between the periodicals of the present day compared with those of the past, and the College Journal, with the medical pereodicals of former years.

CLOSE OF THE WINTER SESSION.

The closing excercise of the winter term of lectures took place in the Melodeon Hall on the evening of the 28th ult.

The first forms of our Journal have already gone to press and consequently we have in the present number only space to give the names of the Graduates, leaving a further account of the Winter Session and its closing excercises, for the Jouurnal of March.]

Of the members of the winter class the degree of Doctor in Medicine has been conferred on the Following Gentlemen,—

J. E. Albaugh, M. D., of Ind.
J. W. Cleaveland, M. D., of Vt.
K. Clymer, M. D., of Ind.
A. C. Hetrick, M. D., of Md.
W. H. Jewett, M. D., of Ohio.
T. Long, M. D., of Ill.
J. Mc Cowen, M. D., of Ohio.
E. S. Milton, M. D., of Ohio.
U. N. Mallett, M. D., of Ind.
J. M. Neely, M. D., of Ind.
J. J. Rowe, M. D., of Ohio.
S. W. Shepherd, M. D., of Ohio.
E. Shilling, M. D., of Ohio.
S. C. Thomas, M. D., of Ind.
A. Tibbetts, M. D., of Ky.
M. B. Taylor, M. D., of Ill.
J. H. Watson, M. D., of Ohio
R. Wells, M. D., of Ky.
A. Hunter, M. D., (Honorary) of Miss.

BOUND VOLUMES OF THE JORONAL.

Those who wish their volumes of the College Journal bound, need but send them to this City, and they will be done according to their orders. To bind a single volume in full sheep, will cost 75 cents.

In cloth or paper, it will cost about ten cents less. The JOURNALS for 1856 and and 1857 can be bound in a single volume for the same price.

We will willingly recieve Journals or Books and get them bound when desired. The sender will need to pay the expense of transportation to and fro, and the price named above. We ask nothing for our services.

BOOK NOTICES.

The Elements of Materiat Medica and Therapeutics, adapted to the American Reformed and Eclectie practice; with numerous illustrations. By J. KOST, M. D., etc. etc. New Edition, revised and enlarged. Cincinnati, MOORE, WILLSTAH, KEYS & Co: 1858.

Some nine years since, when Dr. Kost was a Professor in the Physiologico-Medical College of this city, and Hon. member of the Thomsonian Medical Society of the State of New York, he published a work on Materia Medica and Therapeutics "*Adapted to the new physiological system* of practice," which he then said was the first attempt made to present a scientific and systematic treatise on that department of science to the New System. That work had a wide circulation, and has for a time been out of print.

The work whose title is given above, is a reprint of the former one with the alterations and amendments of many words and phraises, and the addition of several new subjects.

In the place occupied by Pereira's "Tabular view of the History and Literature of the Materia Medica," extending from page 17 to 57 of the old edition, which is now left out, there is in the *new* edition a "Hygenic Introduction," an article on "Digestion" and one on "Physical exercise," extending from page 35 to page 65. This is followed by 10 pages of "Therapeutical Introduction," and, then follows the work as published in the former edition, with an occasional addition of plates, some of which are new, but most of which are old and *very* familiar, and also brief additions to the text; and it is curious to observe the *little* changes of the text which have been introduced in many places, to a very evident change of the thought. For instance, on page 212 of the *old* edition, the author when treating of *Capiva*, writes: —"This article is *not* in general use among Botanical physicians." In the new edition this is changed to read: "This article *is* now in general use among *Eclectics*," and this is a fair sample of many changes.

When writing in regard to *Camphor* nine years ago, the author said: "Camphor is very little used as an internal remedy by some practitioners of the reformed school," etc. *Now* he writes: "Camphor is one of the most popular medical agents known. It is employed not only by *almost all physicians of every class*, but is also a general domestic remedy for nearly every variety of ailments."

But the change in the *language* used is no greater than the change of *views* expressed, and we are pleased to observe that the *Botanical* exclusiveism manifested in the first edition has given place to an eclectic freedom of thought and opinion as well as a broad liberality toward others, as is frequently manifested, not only in introducing medicines of mineral origin, but also in regard to other agents that had formerly been discarded entirely. But we are sorry to observe that this spirit, or some other, has led the author often to take the sayings of others as authority who have repeatedly been proved to utter error and untruths. Doubtless this mistake will be deeply regreted hereafter.

The publishers have done their part well, and aside from the use of the old plates from Howard's Practice, the mechanical appearance of the work is very creditable.

A Practical Treatise on the Diseases of Children, by J. Forsyth Meigs, M. D. Third Edition, carefully revised. Philadelphia, Lindsay & Blakiston.

Several years since Dr. Meigs had a work on the diseases of children published as one of a series entiled "The Medical Practitioner and Students Library." Four years ago this work was withdrawn from that series and published as a distinct and separate publication, in which were introduced several changes and additions. Amongst the additions were an Introductory Essay on the Clinical Examination of children; an article on atelectasis pulmonum or imperfect expansion of the lungs; and over an hundred pages on diseases of the skin, making it a very full and complete practical treatise on the diseases incident to childhood.

In issuing the third edition the author has carefully revised the former one and has incorporated a considerable number of new cases in the text, but has not made the work very much larger.

Too little is generally known in regard to the treatment of the diseases of children, and any addition to this stock of knowledge must confer a benefit upon the profession and upon the human family, and we are pleased when any new work deserving our respect is presented to us. To say that this book is published in good style is saying no more than would be infered from the imprint of its publishers upon its title page.

Scripture Evidences of a General System of Medical Practice being taught in the Bible, and a comparison of the System with Rational Medicine, and Homœopathy. By N. D. Stebbins, M. D. Reprinted from the Peninsular Journal of Medicine.

We have examined this pamphlet with considerable care, and while we can not see that it adds much to the stock of knowledge within the profession, we consider it an admirable Tract to be placed in the hand of such members of the clerical profession as are not satisfied with their high calling but are constantly inclined to meddle with matters either above or below their comprehension, and are led either by word or deed to take upon themselves the duties of advisers of their friends in matters medical.

The absurd crudities and false pretensions of the followers of the exclusive dogmas of Hahnemann have been so often exposed by the writings of Simpson, Hooker, Holmes and others, that none but the wilfully blind can fail to see them, and yet it may be necessary to expose them over and over again as a new race of fools or dupes, like new-born pups, need their eyes to be opened to the truth.

For the purpose of letting in the light upon the mentally blind, Dr. Stebbins' paper seems very well adapted, and we could wish it was placed upon the table of every clergyman's study in the land.

* * *

Lesions of the Epiglottic Cartilage, by Horace Green M. D. From the American Medical Monthly for October.

On the Introduction of the Sponge-armed Pobang into the Larynx and Trachea. By Horace Green, M. D.

From these two pamphlets we learn that Prof. Green still has a great deal of trouble in establishing his favorite mode of treating diseases of the throat and chest by the application of Nitrate of Silver directly upon the diseased parts.

From the time that a patient of his, into whose lungs he injected a strong solution of nitrate of silver under the sanction and observation of the New York Academy of medicine, and who died in Bellevieu Hospital from the effects of that treatment, until the present, there has been a continual warfare between himself and friends on the one part, and the more timid or humane members of the profession on the other, in regard to the possibility and propriety of the method of treatment proposed by Dr. Green. Without entering into the discussion, we can express the opinion that good to the profession and the public must come from this controversy, and that Prof. Green is amply able to carry on his side of the discussion, asking no favor but the final triumph of truth and right.

The Physicians Hand-Book of Practice and Memoranda for 1858. By Wm. Elmer M. D., and Levi Reuben, M. D. Stringer & Townsend, New York 1858.

The above manual is the most complete of the kind which we have ever seen. It contains a classified list of diseases, an alphabetical list of remedial agents, a classified list of poisons and their antidotes, extemporaneous prescriptions, abbreviations used in prescribing, and a record for daily practice for from thirty to sixty patients, and much other space for various memoranda, by means of which many delays and errors are avoided. No physician having once used a memorandum of this kind would think it possible to do without one, and we think this superior in many regards to that issued in Philadelphia, by Lindsay and Blackiston. It contains much more matter that is of interest to the practitioner and is also of a better shape, which makes it much more convenient to carry in the pocket. Every practitioner should have one, especially those who practice out of the cities.

We would suggest that in future editions, the *Alphabetical* method should give place to a systematic classification of medicines.

◆

Annual Report of the Board of Regents of the Smithsonian *Institution,* showing the Operations, Expenditures, and Condition of the Institution, for the year 1856. And Proceedings of the Board up to January 28, 1857.

This title-page so well describes this volume, or at least the first ninty pages of it, that we need not add any remarks. But to this there is appended an Appendex of some 350 pages that deserves further notice, being made up of Lectures, Papers, and Reports touching Science, the Arts, and Natural History, of great value and interest, making it a volume of no ordinary utility.

◆

Third Annual Report of the Board of Trustees and Officers of the Southern Ohio Lunatic Asylum to the Governor of Ohio, for the year 1857.

This report has been sent us by the Superintendent, and from it we learn that although the Asylum has been much over-crowded with patients, there has been but very little illness except that connected directly with insanity. In his report, the Superintendent says; "In the care and treatment of the insane the nearer we approach a family relation the better. It is an easy matter to *keep* the insane; but there is another consideration much more important devolving upon those who have them in charge. Socially they have wants which suffer and will finally die out by confinement, if not properly and timely cared for. The flagging energies of their minds must be supported by a proper cultivation of kindly feelings, and their whole mental system must be kept alive by that familiarity and frankness which when properly applied, constitutes the basis of health and happiness. * * * * *

During the past summer we have added to the amusements which we already had in the hall, the playing of bagatelle, and have thus succeeded not only in attracting the attention of many demented cases but some have become quite expert players ; and in the place of sitting down alone in the hall they are now contending for the privilege of playing."

In investigating the causes of insanity the superintendent found that of those admitted during the year over thirty-one per cent. were predisposed from hereditary transmission. Of the married females who have been admitted to this institution since it was first opened, about one-third of the cases were caused by the puerperal conditions.

Nineteenth Annual Report of the Board of Trustees and Officers of the Central Ohio Lunatic Asylum, to the Governor of Ohio, for the year 1857.

We have been favored with a copy of the report by the Superintendent Dr. Hill, from which we learn that this asylum is doing what lies in its power to forward the great end for which it was established. Some improvements are much needed and earnestly urged upon the attention of the Governor and the State, which we hope will be carried into effect at the earliest possible moment.

PERIODICALS.

American Journal of Pharmacy.—The January No. of this Journal contains its usual variety of matter of great value to the Phamaceutists and the practitioner of medicine.

American Druggists Circular and Chemical Gazette.—The second Volume commences with the January number and we are pleased to know that already it has a circulation greater than any other similar publication in the world. It is admirably conducted, and occupying a position entirely distinct from the Journal of Pharmacy, its success can never prove prejudicial to its more pondorous and older Philadelphia contemporary.

American Journal of Dental Science.—The first number of the eighth volume of this quarterly has been recieved. It is full of interesting articles both dental and medical, and is every way creditable to the dental profession.

Dental News Letter.—The January Number contains articles of interest to the dental prefession and is well worth its subscription price.

Family Guide to Health and Happiness.—Number one of volume two of a monthly Magazine bearing the above title and conducted by the Rev. Samuel Kyle M. D., of Pisgah, Butler Co., Ohio, has been laid upon our table. We have always been earnest advocates of imparting any information to the people which will instruct them in the art of preserving their health; and hence it is with pleasure that we welcome to our table all publications having that end in view.

The American Veterinary Journal has changed its proprietorship, being now owned as well as Edited by Prof. G. H .Dadd, M. D. who is so widely and favorably known as the first and best writer on Veterinary science in America. With its change of proprietorship, the Journal has greatly improved in its appearance.

EDITORIAL ABSTRACTS.

Luxation of the Os Coccygis.—In a paper published by Dr. Roeser in regard to this injury, he observes, that in the few cases on record in which this bone has been dislocated the dislocation has been outwards or inwards, but in a recent case under his own care it was lateral. A large woman thirty-six years af age when descending from a table on which she had been standing fell astride the back of a low wooden chair. The accident was followed by severe pain in the coccygeal region, which was much aggravated by attempting to sit. After some hours it became so severe that she was obliged to take to her bed. Several hours afterwards, when seen by Dr. Roeser she gave strong evidence of aprroaching tetanus. In addition to the pain in the region of the accident, she complained of a dragging sensation extending towards the neck, and stretching along the arms to the fingers which were numb. Upon examination a swelling was felt on the left side of the fissure which proved to be the coccyx torn away from the sacrum and carried toward the descending portion of the left ischium. The end of the sacrum could be distinctly felt. The finger was introduced into the rectum and firm pressure was made downwards and to the right against the dislocated bone, when it suddenly resumed its normal position, and the patient experienced immediate relief.

Nitric Acid in Pertussis.—Dr. Young commends very highly the use of nitric acid in the treatment of whooping cough as first introduced by Dr. Arnold of Montreal, and afterwards so highly lauded by Dr. Gibb. The formula used was:

℞. Acid Nit. dil. fʒxij.
Tinct. Card. comp. fʒ iij.
Syrup simple, f℥ iijss.
Water, f℥j. M.

of this a teaspoonful is given as a dose every hour or every second hour, to be followed with a gargle of solution of Carbonate of Soda to prevent the action of the acid upon the teeth.

Fever.—In an article on Remittent fever by Dr. Baikie, he says; "The term fever has been terribly abused. We speak of remittent fever, intermittent fever, continued fever, putrid fever, typhus fever, typhoid fever, brain fever, hectic fever, lung fever, nervous fever, idiopathic fever, sympathetic fever, etc. etc.; thus connecting by the indiscriminate use of a common term, the most opposite ailments."

If it was generally the custom to apply the term *fever* to a chemical change in the fluids, and the term *inflammation* to a chemical change in the solids, instead of using them indiscriminately as is too often done by writers and speakers, the present confusion and doubt in regard to the meaning attached to these terms would, in a measure, be done away with.

Lead Colic.—Dr. G. A. Kunckler relates the case of an Irish girl who was severly scalded on her hand and forearm, producing vesication. The blisters were punctured and the scald dressed with common white paint, and afterwards covered with cotton and a roller. Her arm was dressed in the same way again the next day, and on the third she was attacked with abdominal pains, retraction of the umbilicus, constipation and discoloration of the gums, indubitably proving that the disease was caused by the lead which was applied to the burned surface.

A Knitting Needle in the Liver.—In the Hospital of St. George in Leipsic, a female, married, and aged forty-six, was placed under the care of Dr. Clarus. She was brought to the Hospital in a state of delirium with excitement and sleeplessness; she took no food, had diarrhœa, gradually lost her strength, and died in twenty-seven days.

On post-mortem examination, there was observed a white callous cicatrix at the juncture of the left and right lobes of the liver. On examination there was found within it a part of a knitting-needle two inches in length. Neither on the abdominal surface nor in the stomach, nor in the liver itself was to be found any trace of a former injury. Neither could the friends of the patient give any information as to the history of its introduction.

Rational Therapeutics.—Dr. R. C. R. Jordan has published a paper under the above title, in which he divides medicines into three classes; Eleminants, Tonics, and Specifics. In the latter class he includes not only counter poisons but those agents which uniting with the tissues of the body, or helping in its chemical process, thus supply the deficiences in disease.

Golden Cenotides.—For a number of years past the attention of the profession has been directed to these insects as possessed of wonderful somnolent powers. Some twelve years since a paper was read to the Academy of Sciences at Paris, to prove that Hydrophobia is produced solely by *fear*. With this idea these Cenotides are given to relieve the general excitement of the brain and nervous system, and to *sleep* off the canine madness.

On taking a dose, the patient is said to fall into a profound sleep which lasts for the space of *thirty-six hours*. Three doses are said to be sufficient to effect a cure. If this idea of the power of this agent be correct, it would be of great value in delirium tremens.

The insect may be found on rose trees. They are collected, killed, dried, and reduced to a powder for preservation and use.

Perineuron.—Under this name, Dr. C. Robin has described a tissue which he has noticed between the neurilemma and the nerve proper.

It is situated around the primitive bundles of the nerves, and sometimes around the fibrillæ of the nerves. It is tubular, and accompanies the nerves in their ramification, and is to them what the sarcolemma is to the muscular fibres. It is found with all the nerves of animal life.

Adulteration in Medicine.—A Select Committee on Adulterations was ordered by the House of Commons, and their Report was ordered to be printed a year and half ago. From this report we learn that of twenty-three samples of opium examined by Dr. Hassel, he found that *nineteen* samples were adulterated. Of forty samples of *powdered* opium, only one was free from adulteration. Of twenty samples of scammony, only two were genuine, one contained *no* scammony, and the others contained sand, wood, gum, flour, etc. Of the ipecacuanha, samples were found containing tartarized antimony as well as dirt. Colocynth was found containing chalk, rhubarb, squills, flour, etc., etc.

Manuscript books detailing the modes of adulteration were kept by many manufacturing druggists, and there is reason to suppose that similar books are not uncommon among our own tradesmen.

Wutzer's Method of Curing Hernia.—Last year we published a description of the method of Dr. Wutzer and a cut of the instrument devised by him. In a paper published by Mr. Coote he advocated a much more frequent resort to this method, and detailed various cases where it had been adopted with success.

MISCELLANY.

TESTIMONIAL TO PROFESSOR'S. ST. JOHN AND JUDGE,

At a meeting of the students of The Eclectic College of Medicine held on the 26th of January 1858, the following preamble and resolutions were unanimously adopted:

Whereas; T. E. St. John, M. D., Prof. of Anatomy and Physiology, and J. F. Judge, M. D., Prof. of Chemistry and Pharmacy, having nearly completed their first course of lectures, in which they have given a practical delineation of the respective subjects pertaining to their departments, in a clear, concise and able manner; Therefore:—

Resolved, That we unanimously concur in expressing to them our gratitude and entire satisfaction; and that by their honorable and commendable deportment as Teachers, they are entitled to our highest esteem and respect, as well as our most sanguine wishes for their future success.

Resolved, That a copy of the above preamble and resolutions be published in the College Journal of Medical Science.

J. S. Moore, *Secretary.*
J. McCowen M. D., *Chairman.*

TILDEN & CO'S POWDERS.

We have received a number of samples of Powdered preparations from the well-known establishment of Tilden and Co., which we shall examine and speak of hereafter. So much imposition and fraud has been practised with regard to these medicines, that those who present the profession with reliable ones, deserve to have the fact known and to secure our patronage.

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ORIGINAL CONTRIBUTIONS.

CLASSIFICATION IN MATERIA MEDICA.

BY PROF. CLEAVELAND.

In the last article only the medicines which act on the Blood and Nerves were attempted to be classified, leaving the consideration of the Muscle and Gland medicines for the present paper.

In the Animal there are two kinds of muscles, designed to subserve two distinct purposes.

The *striated* muscles are supplied with branches of the nerves of locomotion, and the most of them, if not all, are under the influence of the mind. It is true some of the less important ones are seldom called into action, or they may be entirely dormant, but with proper training they can be made to respond to the behests of the intellect.

The *unstriated* muscles surround canals, and ducts, and vessels, and pores, and are *not* under the control of the intellect. Their office is to *contract* and lessen the calibre of the tubes which they surround.

The striated muscles are affected by those medicines that impress the intellectual function of the brain, as well as the neurotics in general. Hence the Stimulants, as Strychnia, or the Sedatives, as Hydrocyanic Acid, as well as the Narcotics, wonderfully impress the muscles of locomotion through the nerves with which they are supplied. But the *unstriated* muscles are acted upon by many medicinal agents which are not Neurotics, but which impress the muscles by their *direct contact* with the muscular fibre on which they act. Many of the Neurotic medicines are also capable of acting on the muscles by direct contact, and hence are classed with the Myonotica as well as the Neurotica.

It has been thought necessary to make these remarks prefatory to considering the arrangement of the muscle medicines, as too little attention has been paid to the modus operandi of the agents that belong to this class; and the second Division of it is not apparently known to exist by a large number of writers and teachers in this depratment of Medical Science.

The Third Class of internal medicines, or the Myonotica are arranged in two divisions.

Division I. Astringentia; medicines which when brought in contact with muscular fibres, cause them to contract. These when brought in contact with the muscular fibres that surround tubes, and ducts, and vessels and pores, cause those fibres to contract and thus lessen the calibre or close the tubes, ducts, vessels, and pores, and accelerate or hinder the flow of fluids or other matters along such tubes, ducts, etc.

Division II. Relaxantia. The action of these medicines upon the muscles with which they are in contact is the exact opposite of the action of the *Astringentia*. They relax or loosen the muscles, making the tubes, ducts, vessels and pores which they surround more patulous or open, and thus allow the free flow of substances through them, or permit them to be filled and congested with their contents.

The *Astringentia* are capable of being divided into two Orders, and perhaps more, but as the peculiar action of these agents has not been carefully studied, there is yet some uncertainty in regard to them. They are naturally divisible into:

Order 1st, Astringentia Generalia,
Order 2nd, Astringentia Specifica.

What has been said in regard to the General and Specific nerve medicines, is also applicable to the muscle medicines, but neither have been investigated with the care their importance demands.

The *Relaxantia* like the first division of muscle medicines are also divided into orders:

Order 1st, Relaxantia Generalia,
Order 2nd, Relaxantia Specifica.

As the existence of this Division has seldom been perceived, but very few have had their attention drawn to them; but the action of Belladonna to enlarge the pupil having given the name to the plant, a recognition of that peculiar property must have been very ancient. All careful observers have seen that it in conjunction with the other Deliriants, not only relaxes the pupils, but acts in a similar manner upon the muscles in the walls of the pulmonary air-tubes and in the cutaneous capillary vessels. We have also strong evidence that they and other articles relax the fibres of the unstriated muscles in other parts of the body. We also know that several of the Sedatives among the Neurotics, as well as the Inebriants, when applied directly upon the muscles of locomotion, produce relaxation of those muscles, as well as when applied to the nerves which are distributed to them.

When once the existance of the Relaxantia is generally admitted, our knowledge of the action of medicines of this Division will rapidly extend.

In the arrangement of the FOURTH CLASS, or the Gland medicines, more difficulty is experienced than with the three other Classes combined. We know that there are various glands in the body, and we know some of the functions of many of them, but they have not received that careful consideration by Therapeutists, which enables us, in many cases, to state the exact impressions made upon them by medicines.

Those glands and surfaces, (for such glands are but a convolution of surface,) which separate substances from the circulatory fluids and pass them out of the system, or the *excretory* glands, have engaged the attention of both the Physiologists and the Therapeutists, and of the former more than the latter, but even now neither branch of the profession know as much as can be desired in regard to them; and particularly in regard to some of the excreting *surfaces* which excrete like glands, so little is known, that what they throw off has as yet received no proper and distinctive name.

The *Fourth Class*, or ADENOTICA are divided into two DIVISIONS.

DIVISION I. ELIMINANTIA; medicines which entering the blood come in contact with the substance of the glands or secreting surfaces on which they act, stimulating them to an increased action of secretion, and pass out of the system along with the increased secretion which they have caused to flow.

Some of these act specifically upon one, and some upon other secreting surfaces or glands.

DIVISION II. SISTENTIA; medicines which act upon glands or secreting surfaces to *arrest* excretion through those glands or surfaces. Although these medicines *lessen* or check the secretions, they usually make their escape from the fluids through the organs on which they act.

The *Eliminantia* are divided into as many *Orders* as there are surfaces or glands, or pairs of glands in the body, which act upon the fluids of the body to manufacture and excrete substances from the fluids and from the system.

Most surfaces and glands which excrete, throw off a *peculiar* substance, or a substance not excreted from any other part of the system. This must be true, for glands and surfaces *manufacture* their excretions, and one set of glands are not capable of taking on the functions of any other, except in those very rare and anomalous cases of *vicarious* excretion which always indicate disease, both in the organ in which the excretion is arrested, and in the organ which takes on the unnatural action.

The only apparent exception to this fact is, in the action of the kidneys; but as regards the urine, they are not manufacturing and excreting organs. They act merely as *strainers*, and not as manufacturers, as they only separate from the blood every thing dissolved in that fluid and which is of sufficient tenuity to be strained through the kidneys. All the other excreting organs manufacture as well as eliminate what is thrown off by them.

In giving names to the various *Orders* of the Eliminantia, the name of the material eliminated is first given, and to that is appended the suffix of *gentia* which means, "to cause to flow;" but as there has been as yet no name given to the excretions of some surfaces, and hence no name for the substance whose increased flow is provoked by the Eliminative medicines, such Orders may take the name of the *surface acted upon*. When Physiologists shall name these excretions, names can be given to such orders as correspond to the others of this Division.

Of the Eliminantia may be named:

Order 1st, Sudorigentia,
Order 2nd, Galactagentia,
Order 3rd, Lachrymagentia,
Order 4th, Pituitagentia,
Order 5th, Sialagentia,
Order 6th,
Order 7th,
Order 8th, Cholagentia,
Order 9th,
Order 10th,

Order 11th, Urogentia,
Order 12th, Emmenagentia,
Order 13th,
Order 14th, Spermagentia,
Order 15th, Lochiagentia.

To these will be added other orders, including what is excreted by the colon, and rectum, and elsewhere not named.

The farther our knowledge in regard to the power of various medicines to stimulate the eliminative organs extends, the greater will be our power in removing from the system any deleterious agent which may have found admittance there; and many causes of disease for which we have as yet no antagonistic remedies, may be expelled from the system by a proper and timely use of the Eliminants. We can also by their use *restore* excretions when they have been arrested or suppressed by disease, or the improper use of medicines.

The *Second Division* of the Adenotica, or the Sistentia, being agents which arrest or check excretion, are of very great value. They are divided into as many *Orders* as the Eliminantia. Like them, they take the name of the excretion which they arrest or check; and when no name has been given to the peculiar substance excreted, they may take a name from the surface on which they act. As the Eliminantia were named by first naming the substance whose flow was increased, and appending a suffix indicative of their power, the name of the Sistentia, are made in accordance with the same rule, but with the prefix *ischo* which has already been adopted to some extent by medical writers with its true and proper signification, and which is here given it.

The Orders of the Sistentia are the exact opposite of those of the Eliminatia, and may be named:

Order 1st, Ischosudoria,
Order 2nd, Ischogalactia,
Order 2rd, Ischolachrymia,
Order 4th, Ischopituitia,
Order 5th,
Order 6th,
Order 7th,
Order 8th, Ischolia.
Order 9th,
Order 10th,
Order 11th, Ischuria,
Order 12th, Ischemmensia,

Order 13th,
Order 14th, Ischospermia,
Order 15th, Ischolochia,

It will be seen that in the formation of the nomenclature of these Orders of the *Sistentia*, several blanks remain to be filled. This is owing in part to the difficutly in finding words of *Latinized Greek*, already in use, which shall express the idea intended to be conveyed, *and none other*. The knowledge of physiology in possession of the ancients was too meagre to give them all the terms demanded by the present advanced state of the science, and hence a few words have to be coined to fill the omissions. It is also rendered imperfect in part by our own want of knowledge; but this is of less importance as our knowledge of Therapeutics in regard to the Sistentia is even less perfect than our knowledge of the organs on which they act. But when we clearly see *what we need to learn*, our progress will be commensurate with our industry, and if as each new truth is brought to our knowledge it can find a place fitted for it in our Classification, we never need fear that it can cumber our pathway in our progress in the science of Rational Medicine.

I have presented this outline of a classification of internal medicine, not with the purpose of staying progress or improvement, but to elicit the most thorough and searching criticism the subject is capable of, and I will consider it as great a personal favor for my friends to point to an error which demands correction, as for them to supply the omissions which are apparent.

PERTUSSIS, OR WHOOPING COUGH.

BY THEODORE C. MILLER, M. D.

Although the mucous membrane of the air passages is frequently found to be unaltered in this disease, some observers as Watt, Marcus, and Guersont, have found the condition of that tissue identical in Pertussis and in Bronchitis. Webster and Desruelles are of the opinion that the brain is the principal seat of the disease, while Marshall Hall contends that it is primarly seated in the spinal cord. Hufeland, J. Frank, Schoentein and others are as well convinced of its seat in the Phrenic or Pneumogastric nerve. Harless is of the opinion that it is an exanthematic disease of the bronchial mucous tissue. Canstatt advances the idea that it has its existence in a specific abnormal condition of the blood which resembles that existing in other epidemic and exanthematic diseases, and that it tends to localize itself upon the mucous coat of the bronchial tubes, which condition induces by irritation reflex excitement or irritation of the respiratory nerves giving rise to those characteristic paroxysms of cough.

J. Frank is also of the opinion that pertussis is closely allied to, and resembles in many essential points, the exenthematic diseases. Authenrieth is inclined to the belief, after very careful observation, that pertussis is only a modification of measles; and further, he holds that pertussis is a mild form of measles, and the latter a more severe or violent form of pertussis. It is an established fact that pertussis is very frequently preceeded, accompanied or followed by measles. Garms and Kissel are of the opinion that the disease is confined in its manifestation to the region of the vagus nerve.

The more common symptoms of whooping cough may be stated in brief, to be as follows: The disease commences with catarrhal symptoms such as irritation of the throat, cough, hoarseness, frequent sneezing, redness and increased sensativeness of the eyes; but at times these advance symptoms entirely fail to show themselves. After a longer or shorter period these symptoms give place to those characteristic of the disease. The cough consists of several sudden and irregular expiratory sounds following each other in quick succession, being interrupted at intervals by a sharp whizzing inspiration, during which the glottis appears to be nearly closed, while all of the respiratory muscles are taxed to their utmost to inflate the lungs; the face often becomes suffused with blood and of a bluish tint, the eyes are also injected and often protrude, and in these severe cases spasms of the respiratory muscles and general convulsions often occur. The paroxysm often terminates in vomiting.

Since every epidemic has its peculiarities, we are not surprised to find that many presumptive specific remedies are lauded by the different members of the profession, and also, that the community being dissatisfied at the results of medical treatment in this disease, are often inclined to permit it to run its course rather than risk the danger of complication through inappropriate medical treatment. I shall therefore only mention those remedies which have in my hands proved of value. They are few in number. In the first place as to prophylactics, I advise to keep the children warm, and to avoid exposure to extremes of temperature and the influence of the contagion. I have never found it necessary to give emetics in the catarrhal stage for febrile symptoms, and when the patient is debilitated I have been induced to believe their use rather an injury than of benefit, often inducing complications of an unpleasant nature. When the disease has commenced its career, there is little to be done except to watch its progress and guide it through its various stages. The patient should remain in bed, the room be kept of an even temperature, and his diet should consist of nutritious vegetables. He should take frequently of some mucilaginous and saccharine drink, and when necessary a mild narcotic may be added. At times it may be necessary to give infusions of ipecac. catnep or squills as a mild diaphoretic and expectorant. When inflammatory symptoms arise it may be well to use the foot-bath containing either carbonate of potassa or common salt, together with a fomentation of hops or other bitter herbs, at the same time a solution of pure nitrate of soda in an infusion of althea officinalis may be taken if gastric irritation should occur. When the bowels become obstructed magnesia may be administered. In the second stage of the disease, after the inflammatory sympoms have subsided, antispasmodics may be given, such as ipecac. in small doses, or the oxide of zinc.

The salutary effects of tannic acid are already well established. It may be given either alone or in combination with benzoine. It should be given in from a half to three grain doses according to the age of the patient. In my practice I have usually combined the tannic acid with an antispasmodic remedy, as in the following formula:

℞. Acid. Tannic. grs. vi.
Pulv. Ipecac. gr. j.
Sacch. alb. ʒj. M. et ft. chart. No. IV.

One of these to be taken every three hours.

Extract of pulsatilla has been highly, and I think justly lauded in this disease. Rademacher considers it the best remedy used in pertussis and gives it in the form of powder triturated with sugar of milk. Seidler gave the following formula:

℞. Ext. Pulsatill. grs. ij.
Sacch. lact, ʒj. M. et ft. chart. No. IV.

One of these to be given three or four times in twenty-four hours. I can testify also to its value, as it has always proven one of my best remedies. I sometimes combine it as follows:

℞. Ext. Pulsatill. ʒj.
Tinct. Lobeliæ Vin. fʒj. M. et solve.

The dose is from five to twenty-five drops, repeated three times a day.

Belladonna is with some reputed a specific, especially in its power to alleviate the spasmodic stage, and to abbreviate the duration of the cough. It has been recommended by Fisher, Schaeffer, Hufeland, Laennec, Gausant, Wood, I. G. Jones, and others. It has not proven equally efficient in different epidemics. In some it is apparently of little use as has been fully proven by J. Frank. This remedy should not be given in too large doses, nor its use be too long continued, as it is liable to leave the eyes weak and a tendency in some cases to Encephalitis; yet when used it should be given in small doses and increased till its physiological effects are observed, such as the enlargement of the pupil, etc. The dose for a child from two to four years old should be, of the alcoholic extract, from one tenth to one fifth of a grain, once or twice a day. I must state that I have not been very free in the use of this remedy from its liability to leave a weakened condition of the eyes already mentioned; when I have used it, I have usually combined it with nitrate of soda. I have also found the following formula very useful:

℞. Ext. Belladon. Alcohol. grs. ij.
Tinct. Cimicifugæ, f℥ ss. M. et solve.

The dose is from 10 to 15 drops three times a day. I have also found the extract of the green coffee berries of decided benefit, especially when prepared as an emulsion, in combination with bicarbonate of potassa, tincture of opium and of the oil of cinnamon, or in the form of a syrup.

IMPETIGO.

BY C. T. LAWRENCE M. D.

There is no class of diseases which has been so much neglected as those of the skin, and none so easily recognized, for their characteristic phenomena are appreciable by the eye, while they are at the same time extremely frequent. These circumstances may perhaps account for the confusion which has prevailed in the history of cutaneous affections. Want of classification in the first instance, and at a later period imperfect classifications have greatly contributed to envelope in obscurity the history of cutaneous diseases. But of late years several writers have endeavored to reduce the study of these diseases to some order; and none have succeeded more admirably than M. Biett, as translated from the French of M. Cazenave's Practical Compendium, by Thomas H. Burgess, M. D.

In speaking of Impetigo, M. Cazenave classes it among the noncontageous diseases of the skin, characterized by an eruption of psydraceous pustules. "When the pustules of Impetigo are grouped together, forming circumscribed patches of different forms and extent, they constitute the variety described by Willan as *Impetigo figurata*. When they are scattered and do not assume any particular order, they form the Impetigo sparsa of the same author. Each may assume the acute or chronic form.

Impetigo figurata occurs most frequently on the face, and especially on the cheeks, it is, however often met with on the extremities, and even on the body, and usually attacks children during dentition.

The eruption is pustular from the beginning; the pustules are small, confluent, and slightly raised above the level of the skin, they burst between thirty-six and seventy hours from their formation, and discharge a purulent fluid. The heat, itching and tenison are then increased. The discharge continues, the scabs increase in thickness, and it is in this condition that the patient generally applies to the physician.

When the disease is not prolonged by successive eruptions, it remains in this encrusted condition from two to four weeks. The itching and heat then subside, the exundation diminishes, and the scabs are gradually but irregularly detached, leaving a red and tender surface behind.

When this variety affects the lower extremities, the inflamed patches are generally larger and of an irregularly oval form, whilst on the upper extremities they are more circular and less extended. The pustules are developed in the same manner as on the face, and are speedily replaced by thick, yellowish green, and brown scabs.

When these are detached, they are succeded by others, produced by the dessication of the sero-purulent fluid discharged by the inflamed surface.

Impetigo sparsa, differs from the preceeding variety merely in the irregular and scattered distribution of the pustules, otherwise it pursues the same course and produces the same kind of thick, rough, and greenish-yellow scabs." [This variety most frequently attacks the extremities, especially the inferior extremities about the joints.] "When the disease is intense and occupies the lowor extremities, it is sometimes complicated with anasarca and extensive ulcerations;" [and will frequently be found complicated with other diseases of the skin, "especially with *lichen*."] [Impetigo may be mistaken for eczema, sycosis, or porrigo; but the pustules as decribed,] "which are succeeded by thick rough and yellowish scabs, are sufficient to distinguish impetigo from the vesicular or vesiculo-pustular eruptions of eczema, which on the contrary are succeeded by thin, laminated, scaly crusts.

When Impetigo figurata appears on the chin, it requires some attention to distinguish it from sycosis. The pustules of sycosis are larger, isolated, more raised, and less yellow than those of Impetigo, the scabs are drier, of a deeper color, and are only reproduced by a new eruption. The peculiar pustules of porrigo favosa imbedded in the epidermis and terminating in yellow umbilicated scabs, are sufficient to distinguish them, beside the different varieties of porrigo are contagious and cause the hair to fall, symptoms which are not characteristic of the impetiginous eruptions."

This disease is not considered dangerous, but will be found exceedingly troublesome, and sometimes repulsive; the physician should never promise a speedy cure, a circumstance which seldom occurs, especially in broken down constitutions, or in persons of advanced years.

Impetigo larva. This is a variety of impetigo which I shall speak of, and which has proved so troublesome to cure in the hands of many. It was formerly classed among the porrigos under the name of *Porrigo larvalis*, until M. Biett assigned to it its proper place.

I was called to see a child with this disease the first of October last, and found the hairy scalp covered with a thick brownish crust. It was very dry and hard, with several cracks in the crust from which was oozing a thick viscid fluid. To have attempted its removal with warm water and soap would I think have proved as unsuccessful as an attempt to remove the outer shell of a cocoanut by the same means.

After making some inquires in reference to what had been done, I was surprised to learn that the child's head had been in that condition most of the time for sixteen months, and that I was the fourth physician who had been called in to treat it. The mother, to all appearance a healthy woman, gave me the following history of the case. When her babe was two months old, she accidentally scratched its head with a comb-tooth, and in two or three hours the back part and top of the head became covered with very small yellow pustules which very soon began to discharge the same kind of fluid that was at that time oozing from the cracks as above described. These pustules, I suspect were present, mixed with vesicles, some of which contained purulent matter and others a more viscid fluid, before the child received the scratch from the comb-tooth. It was a mere rupture of some of the distended vesicles. She also stated that each of the other physicians succeeded in cleaning the head and drying up the excretions, but in two weeks it would return again with more than its former virulence. What remedies they used I am unable to say, but suppose they were composed chiefly of the different preparations of lead in the form of washes and ointments. There was no internal medicine used.

The father was not present, but I inquired whether he had ever had any of the skin diseases, or had ever been troubled with scrofula, also in reference to his habits, but the answers to these questions would not justify me in my suspicions that it was a child of scrofulous or syphilitic parents that I was called upon to treat. I had better state here, that in addition to what I found on the scalp, there were several hard thick dark-colored scabs seated on a violet-colored surface on the face and hands, with considerable inflammation of the lymphatic ganglions; it was this that led me to suspect a syphilitic taint. I ordered the child's head to be covered at night with the following mixture:

℞. Pyrii pulv. ʒiij.
Morph. sulph. grs. ij.
Adeps. ℥ij. M.

and a nicely fitted oiled silk cap to be drawn over it, to protect the parts from changes of temperature, and to promote the favorable action of the remedies. This had the desired effect, as the loathsome mass readily washed off with warm water and soap next morning, exposing a red and slightly inflamed surface. I then ordered the hair to be cut close and emollient poultices of bread and milk to be applied through the day, and at night had it washed, and the following ointment applied:

℞. Ung. Zinci. oxidi, ℥ij.
Ext. Conii, ʒij. M.

These with alkaline and sulphurous lotions and slight inunctions with ointments of a similar nature, mild laxatives, and a few repetitions of the bread and milk poultices, were all that was required to make, as I thought, a permanent cure. But this cure proved to be of as short a duration as those made by the other physicians. I then determined to see the father, and question him. He stated very frankly that he had had Syphilis about four years ago, but that he was cured of it before he was married. This satisfied me that my previous suspicions were correct, and if I had treated the case accordingly, I would have saved myself the mortification of having made a failure in my first attempt.

I called the next day, to see the child and left the following prescription:

℞. Syrup. Corydalis, f℥vij.
Potass. Iodid. ʒiij. M.

S. Dose a teaspoonful three times a day.

I directed the alkaline and sulphurous lotions to be resumed, and the following ointment in place of the zinc and conium, to be rubbed on the scalp after each ablution:

℞. Ung. Sulphuris Iodidi, ℥ij.
Potassæ Carbonatis, ʒij. M.

This treatment was kept up for ten days, when I made a change in the syrup, and prescribed the following:

℞. Aurii et Sodii Chloridi, gr. j.
Aquæ distillat., f℥j.
Stilling. Syrup. comp. f℥ij. M.

Dose, a teaspoonful three times a day.

This was continued for eight days, when I ordered the former syrup to be resumed, and the following wash in place of the Sulphur and Iodine ointment:

℞. Acid. hydrocyanici dilut.
Spt. rectificat. āā, fʒiv.
Acid. Tannici, grs. xv.
Aquæ distillat. f℥vjj. M.

And one of the following powders to be given every other day.

℞. Rhei pulv., ℈ij.
Sodæ Bicarbonatis, ʒss.
Ipecacuanhæ pulv., grs. x. M. et chart. xv. dividendæ.

With the above treatment, and a strict attention to diet and cleanliness, by the latter part of November the child's head was perfectly well. The hard crusts on the face and hands had entirely disappeared, and the inflammation of the lymphatics had subsided.

I called to see the child a few days ago, and found it had gained rapidly in flesh, and showed but few marks of having suffered so recently with a loathsome disease.

Cazenave says, "when this variety of impetigo occurs on the *hairy scalp*, the pustules are set close together, of a yellowish-white color, and sometimes occupy the posterior part of the head only; whilst in other instances the disease appears on every part covered with hair. The pustules are very small, and are mixed with vesicles, some of which are purulent and others transparent. They soon burst, or as more frequently happens, they are torn, and throw out a thick viscid fluid. The scabs are either scattered or confluent, and spread over a surface of variable extent. The exudation continues, and if the hair is long and not properly attended to, the scalp becomes covered with a thick brownish crust, which dries and cracks into several friable pieces. When the disease is of long standing, and the incrustations firmly adherent, the hair sometimes falls off from some of the diseased parts, but this is merely a temporary baldness, and very different from that which follows *porrigo favosa* and *porrigo sculutata*. The bulbs of the hair are not destroyed, they are only inflamed, and new hair soon grows again as if the parts were never affected."

SUGAR IN THE LIVER.

BY PROF. ST. JOHN.

In the January number of the College Journal I mentioned as one of the normal functions of the liver the formation of sugar out of the material carried to it by the vena porta, and as much attention has been directed to this action by modern physiologists I am induced in this connection to present the results of those investigations.

M. Bernard, of France, first asserted that sugar is formed in the liver independent of the character of the food, and even when it is not present in the intestines or in any of the tributary veins of the vena porta, but was developed in the hepatic capillaries directly from some of the elements of the circulating fluid. In proof of his position he relied upon experiments like the following: A dog that had been fed some hours previously on substances destitute of starch or sugar, was killed, the abdominal cavity opened immediately, and ligatures placed upon the branches of the portal vein, as well as upon the vena porta itself. Upon an examination of the blood taken from the veins on the distal side of the ligatures it was found to contain no sugar, with the exception of the blood of the vena porta, in which it was detected. In the liver it was found in abundance. As it was not found in the mesenteric splenic, or pancreatic veins while its presence was detected in the vena porta, the question is, how did it get into the latter? Evidently it must have passed in by a reflux of blood from the liver, which owing to the absence of valves in that vein might have taken place after death.

Subsequently; however, Bernard was led by the result of numerous experiments to discard this idea, and then advanced the opinion that there existed in the liver a substance which was capable of being changed into sugar by the action of that organ when properly stimulated.

That the various secreting organs throughout the body are stimulated to the performance of their functions through the influence of the nervous system, either by a direct or a reflex nervous action, is a fact that is admitted by all physiologists, and it has been advanced by Bernard that the liver is excited to action, especially in the formation of sugar by reflex nervous action, the stimulus being conveyed to the brain through the pneumogastric nerves and thence transmitted to the liver, along the spinal cord and sympathetic nerve. Upon a section in the neck of both pneumograstic nerves, not only did the liver cease to secrete, but the sugar that was previously formed was observed to gradually disappear. The section of only one of the pneumograstic nerves did not produce any appreciable effect upon the liver, and when after a period of eight or ten days from the section of the first, the opposite nerve was divided no interruption took place in the secretion of sugar, because of the reunion of the one formerly divided. Thus he was induced to adopt the opinion that in the healthy animal the reflex action that caused the liver to secrete sugar, originated in the stimulus which the respired air gave to the terminal branches of the pneumograstic nerves in the lungs, and supposing, as he did, that the sugar formed was designed only for the use of the lungs, he asserted that at each act of inspiration the filaments of this nerve received from the inhaled gases a stimulus that was conducted along the trunk to the brain, and thence reflected along the spinal cord and splanchnic nerves to the liver.

It is not at all improbable that this organ is excited to action by the stimulus received and communicated to it in this manner, but we have no reason to suppose that this is the only source from which the liver derives its stimulating force, or that these are the nerves that normally call the secreting power of this organ into action. Indeed if this be the cause, how can we account for the fact that the secretion is found to vary at different portions of the day, while the respiration, and consequently the stimulus continues the same, and although there are many other facts that would lead to the discarding of this portion of Bernard's theory, yet this one is sufficient to indicate that there are other and more powerful causes of action in the performance of the functions of this organ.

Dr. Halrey in a paper published in the British and Foreign Medico-Chirurgical Review, says: "If the pneumogastric is the nerve which carries the stimulus to the brain to be thence transmitted through the spinal cord and splanchnic nerves to the liver, the point of departure of the stimulus is most probably in the liver itself, and that the cause of the reflex action may originate in the stimulating effect of the portal blood upon the hepatic branches of the pneumogastric nerve." In a number of experiments which he instituted by injecting various substances such as alcohol, ether, chloroform, or ammonia, into the portal vein to simulate as nearly as possible the stimulating effect of the portal blood, he found that the liver was excited to secrete an excess of sugar, proving that it is the stimulus imparted by the presence of the portal blood, upon which this organ is dependent for the performance of its functions.

If, then, this be the case, is it probable that the liver is excited to action only by the reflex nerve force, or do the various substances taken there by the blood act by stimulating directly the tissue of the liver itself?

Dr. Harley observes: "The assertion, that an organ like the liver can be excited to perform its functions without the intervention of the nervous system, may appear to some as unwarrantable. Indeed were it not that we already know muscles to possess a contractile power altogether independent of nervous influence, I should not have dared to hazard such an opinion. Bernard, however, has clearly demonstrated on frogs poisoned with woorari, that although the influence of the nervous system can be totally destroyed (as is seen by the muscles not contracting when nerves are galvanized), galvanism, applied directly to the muscular fibre itself, excites immediate and violent contractions. * * In the case of the muscles we have, therefore, undoubtable proof that the specific property does not exist in the nerves, but in the muscle itself. And I see no reason for doubting that the various internal organs of the animal body are constructed for the performance of special and peculiar offices, and possess within themselves their specific properties, altogether independently of nervous agency; and I am further of opinion, that when we shall be able to separate the nerve agency from the muscles, we shall be equally successful in calling their functions into action by the direct application of electricity, or any other stimulus, to the tissue of the organs themselves."

Professor Bernard also advances a similar view of the subject. In speaking of the experiment of Dr. Harley, he remarks that the various substances injected into the portal vein may have acted directly upon the tissue of the liver itself, independently of the nervous system.

It appears from many observations, that during the time of active digestion sugar is formed to its greatest extent, and at this time it is evident that the portal blood must of necessity contain a greater amount of stimulating particles, as it is then loaded with the nutritive material. These substances taken into the liver may and probably do, to a certain extent, act upon the tissues of the liver, thus becoming a direct stimulus to this organ, but there is another method in which their influence may be explained, and one which will be most likely acceded to as it corresponds with the idea of each organ being dependent upon the action of the nervous system. The portal blood loaded with the material that has been thrown into it from the digestive forces, acts by exciting the hepatic branches of the pneumogastric nerve, which thence transmits the impression to the nervous center, and is reflected back through the spinal cord and sympathetic nerve to the liver, and thus the normal secretion of sugar may be explained to be occasioned by the presence of the nutritive material in the portal blood.

This action of the liver may at first appear of small moment, but when we consider that the secretion of any organ depends upon the amount of normal stimulus with which it is supplied, and that an excess or diminution of that secretion which usually constitutes diseases may arise from an increase or deficiency of the normal stimulus of the organ, we at once see the importance of considering well the physiological action of any organ before attempting to explain its pathological conditions. And as it has been proven that there are many substances which when injected into the portal vein, are capable of abnormally exciting the liver in the secretion of sugar, may we not from this fact gain some insight into the cause as well as some guide to the successful treatment of diabetes mellitus, a disease that has so long been regarded as almost uncontrollable.

The evidence of the presence of sugar in the liver is obtained in the following manner: A portion of liver which has been previously beaten in a mortar must be boiled in a small quantity of water, and then filtered. This fluid is found to contain all the properties of a saccharine liquid, becomes darker on being boiled with liquor potassæ, fermentation may be caused by the addition of yeast at a certain temperature, and alcohol obtained from the fermented fluid by distillation. By adding the tartrate of potassa and copper a precipitation of the brown oxide of copper ensues.

Of the use of this material in the animal economy, Bernard supposes that it is all decomposed by the lungs, but the investigations of other observers do not substantiate his opinion, as in a number of carefully executed experiments by Chauveau, he found a larger quantity of sugar in the blood from the left than from the right side of the heart which result has been corroborated by the investigations of Hawley, and we must look for some other disposition of this material. Chauveau asserts that it is taken up from the capillaries of the general circulation, as in an examination of the blood of the femoral artery of the frog it was found to contain twice the quantity of sugar as that of the corresponding vein.

"This fact seems to be supported by analogy when the probable uses of sugar in the animal body are taken into consideration. We know, for example, that all animals, from a very early period of their development in the uterus up to the time of their maturity and decay, have a sugar-generating apparatus in more or less active operation. During digestion, when the blood is loaded with nutritive material, and when, consequently, the assimilative process is looked upon as being most active, the greatest amount of sugar is thrown into the general circulation."

These facts seem clearly to indicate that the sugar formed thus abundantly must bear some intimate and important relation to the processes of nutrition, and must be essentially necessary in the production and repair of the various tissues of the body. Hence we must conclude that the sugar is taken out of the blood at the capillaries of the general circulation when formed in normal quantities, but when formed in excess the portion not used is most probably eliminated by the various emuntories of the body, especially by the kidneys.

PHYSIOLOGICAL EFFECT OF STRAMONIUM.

BY LEWIS E. MILLER, M. D.

Having seen in the College Journal for July, 1857, an article on poisoning by Stramonium, I am induced to send you the following remarks on its peculiar physiological effects.

Stramonium in its poisonous effects is similar to Belladonna, but it is much more intense in its operation. All parts of the plant are possessed of poisonous properties, but the seeds are found to be the most powerful. The herb has a nauseous, stupefying smell, and a disgusting bitter taste, which are also characteristic of the seeds, with an additional sharp or pungent sensation when taken into the mouth.

The symptoms of poisoning are a scarlet red face, a peculiar dryness, burning constriction of the throat, great thirst, red tongue, strangling, vomiting, diarrhœa, which is often accompanied with bloody stools, thereby occasioning violent pain in the abdomen, an increased secretion of urine, and occasionally hemorrhage from the uterus and rectum. It is always accompanied with a severe head-ache which sometimes shows itself when one falls asleep near a stramonium plant, even in the open air; the pupil is dilated, and often perfect blindness ensues, with various other conditions such as dizziness, trembling, aphonia, delirium, sexual excitement, insensibility to external impressions, convulsions resembling chorea, tetanus, apoplexy, paralysis and death.

Daturin like Atropin is poisonous in small doses. The cheerful or wild delirium which follows poisoning by stramonium so much resembles the same symptoms which are seen after the excessive use of Belladonna, that Lichtenfels, Frolich and others have attributed the same pharmæodynamic properties to Daturin as is possessed by Atropin, their only difference consisting in the more intense action of the Daturin, as well as the greater rapidity with which its effects are produced. Rante found by a number of observations that Atropin affected the pulse to a greater extent than Daturin, it also stimulated the secretions more strongly. Other observers assert that both, in small doses, decrease the frequency of the pulse, but by a continued use serve to accelerate it. Lichtenfels and Frohlich believe, that the change in the pulse must not be attributed· to a chemical action, but must be ascribed, partly to a degree of irritability of the heart occasioned by the intestinal irritation, and partly from the influence of the poison in the blood upon the ganglia of the heart, or upon the spinal marrow.

Retsenkowit, reports a case in which the fresh leaves were applied to an extensive burn which was followed by decisive narcosis, furious delirium and partial loss of sight.

Camerer speaks of an individual who was totally blind for two days, occasioned by the vapor developed while preparing the extract of stramonium. Allan in the Lancet for 1847, reports a case of poisoning by this herb, in which he found Daturin crystals in the urine, which were precipitated by an infusion of Gallnuts. One drop of the concentrated decoction of stramonium applied to the eye will produce dilitation of the pupil, while the other remains contracted.

Stramonium has also a very peculiar influence upon the sexual passions, first operating as a stimulant, which is followed by a corresponding depression. Perhaps this may be explained by the narcotic effect of the stramonium on the cerebrum, while at the same time the cerebellum was not as readily influenced by its presence, [If it could be proven that the cerebellum had any connection with the sexual organs this idea might be more plausible.—Eds.] as in physiological sleep the predominating activity of the cerebellum oftimes awakens the most excessive erotic phantoms. Thus the pure narcotics or sleep producers are found to influence some functions of the brain before others, owing to the difference of time in which the central organs become affected.

KRANS in speaking of Stramonium divides its effects into four stages. 1, that of intoxication lasting from five to seven minutes: 2, that of reflex motory action with psychical adynamia of about one hour's duration: 3, the awakening of the pantominic activity without consciousness: and 4, the return of consciousness and psychical action.

Stramonium seems to produce less deleterious effects upon herbiverous than upon carniverous animals, and Osterten observes that horses can bear several pounds of the leaves without injury, the seeds however, possessing much stronger power, cannot be taken with equal impunity. This plant was used by the ancient robbers to produce somnolence, and it has also been often used by voluptuaries for the accomplishment of their sexual desires.

Dr. Kalt Rissel reports in his excellent Handbook of Physiological Pharmacopœia, of giving a boy four years old, ten grains of the extract of stramonium, which produced intoxication, distortion of the face, convulsive motions, gnashing of the teeth, difficult deglutition, an injection of the conjunctiva, red face, increased temperature, pulse 120—130, inability to hear or see, and a continued tetanic numbness.

Dr. T. G. RADEMACHER says: "I have used it in Brain-fever with remarkably good success, as it immediately relieves the unfavorable symptoms, and cures by its continued use. At first it was a difficult matter to ascertain the quantity in which it should be given, and knowing it to be a powerful remedy, I was compelled to proceed cautiously. I found that in general I needed about fʒj of the tincture in twenty-four hours. Occasionally when the pain was excessive, I have increased it to fʒiss, in the course of the day. After a number of experiments I found the following mixture to answer all the indications, and have often used it in such cases with marked effect.

℞. Tincture of Acetate of Iron, f℥j.
" Sramonium seed, fʒj.
Gum Arabic, ℥j.
Water, f℥ viij. M.

of which I directed the patient to take one tablespoonful every hour. In some cases its use has been followed by diarrhœa, when I combined with the above, half an ounce of spirit of nicotine. Many bad effects have been attributed to this agent, but I have used it in Brain fever so extensively, that had it exerted, in sanitive doses, any injurious effect upon the organism, I should not have failed to discover it. In only one case did this dose appear too large, and that in a lady of a peculiar nervous, irritable temperament, in whom it produced slight convulsive movements of the arms. In many experiments upon myself with this tincture I found that it produced only a remarkable dryness of the mouth. I think it, in proper doses, a valuable agent in those cases of Brain fever accompanied with much pain, as it has been peculiarly successful in my hands, when given in the proportions of fʒj during twenty-four hours."

Last Fall I had charge of several cases of severe pain in the head, swelled and inflamed eyes, intense pain in the eye ball, and as all my remedies failed to give relief, I tried the mixture of Rademacher above quoted, with the most happy results.

In cases of poisoning by stramonium, an emetic and purgatives should be given immediately, after which may be given vinegar and water as a drink, vinegar clysters, tannic acid, coffee, sinapisms to the region of the stomach, to counteract as soon as possible, the approaching apoplectic symptoms. Among the antidotes of narcotic poisons, tannic acid holds an important rank, as it combines with the alkaloid containing the poisonous matter, thereby forming an innoxious compound. It would therefore be well, immediately after the operation of the emetic, to give a decoction of china-oak, willow bark, or a tincture of gallnuts, or of chinese tea, which contain large quantities of tannic acid. For the nervous symptoms many remedies are of use, as camphor, valerian, muriate of ammonia, musk, ether, sinapisms, etc., cold applications and foot baths are of excellent service to prevent local congestions. Sour whey has been very highly recommended after the action of an emetic.

Bonchardat recommends Iodine; A. Garrod, animal charcoal in large quantities.

PNEUMONIA AND ABORTION.

BY J. A. HENNING, M. D.

The following complicated case, was very interesting to me, and I have been induced to report it for the College Journal. Pneumonia is generally the prevailing disease, every winter in the northern portion of Indiana, and the most dangerous one we have to contend with; proving fatal with many practitioners, though some have tolerably good success with it; but they do not follow the old treatment which was adopted ten or fifteen years ago.

I was summoned to see Mrs. B. F., aged 18 years, November 20th, 1857, medium size, rather low in stature, and a tolerably fair specimen of the sanguine-lymphatic temperament. She had been enjoying ordinary good health; had been married about ten months, and was near the end of the fifth month of utero-gestation.

The most prominent symptoms manifested, were acute pain over the inferior portion of the left lung, with a sense of stricture or oppression over the entire chest. The pain and oppression would increase at a full inspiration. Coughed almost constantly, and scarcely any matter was expectorated, and the expectoration was of a rusty color, characteristic in this disease. The respiration was laborious, averaging about 40 per minute. Considerable febrile exitement prevailed in this case, with marked periodicity, exacerbation occuring in the evening, and intermission in the morning. The patient complained of a severe pain in the forehead and temples, the pupils of the eyes were somewhat contracted, the skin was dry and husky, and extremities rather cold. The tongue was coated white in the center, but red at the tip and margins. Pulse full and hard, and accelerated, beating 110 per minute. Bowels rather costive.

She stated that about the 18th or 20th of October, she first felt quickening of the fœtus. Two weeks ago, she visited her mother on horse back, some fifteen miles distant, and during that time received a slight fall, immediately the fœtus moved violently and in a few minutes ceased, and since she has not experienced its movements and believes it to be dead. Her breasts have been decreasing ever since. This morning at 3 o'clock she thought the membrane ruptured in an effort of coughing, and the liquor amnii escaping slowly at every effort of coughing, but experienced no labor pains. I made a vaginal examination, and found the os uteri slightly dilated. Taking the above symptoms in consideration as it was a hard case from the start, I prescribed the following with care, directing the nurse to observe the action of the medicine, and symptoms until my return.

℞. Comp. Powder of Jalap, ʒj.
Bitartrate of Potassa, ʒss.
Hot Water, ℥ij. M.

Divide into three doses, take one dose every hour. If it does not act upon the bowels in five or six hours, take one tablespoonful of Castor Oil. For the cough and febrile excitement.

℞. Com. Powder of Ipecac. and Opium, grs xl.
Pulv. Lobelia seed, grs. xx.
Ipecacuanha, grs. xxx. M.

Divide into ten papers, give one every two hours, in tea of Slippery

Elm. Externally I applied a sinapism over the seat of pain in the chest, after which fomented the entire chest with hops and tansy steeped in hot water and vinegar. Bathed the feet in warm water and applied sinapisms around the ankles.

21st. Pulse was rather small and wiry, beating 130 a minute; the bowels were moved but once since yesterday. The urine high-colored and somewhat scanty, and she coughs almost constantly but expectorates more freely; pain in the chest not so acute, but now of a dull heavy ache. The tongue is coated and turning brown. Febrile excitement about the same as yesterday. The patient complains of a severe pain in the head, and is slightly delirious. Respiration 45 a minute, She also experienced a few labor pains, confined to her lumbar region, occurring about every hour. I made another vaginal examination and found the soft parts in a yielding condition, the os uteri more dilated than it was at the previous examination, but I could not diagnosticate the presentation. The liquor amnii is still escaping slowly. To relieve the liver and bowels:

℞. Podophyllin, gr. j.
Leptandrin, grs. ij.
Sanguinaria, grs. iij.
Sugar of milk grs. x. M.

Divide into four papers, and give one every three hours until they move the bowels.

℞. Syr. Ipecac. f℥j.
" Senega, f℥j ss.
" Squills, f℥j. M.

Take one teaspoonful every three hours.

For the suppression of urine, take fʒj of sweet spirits of Nitre in f℥j of an infusion of Eupatorium purpurum, three or four times a day.

At 8 o'clock P. M., I visted her again. She had had several discharges from her bowels, and urinated freely. She had labor pains more or less all day. On examining *per vaginam*, I found the feet were presenting, and progressing favorably. In a few hours the fœtus was expelled, and after its expulsion, uterine contraction ceased entirely, notwithstanding all my efforts at arousing it by the exhibition of an infusion of equal parts of Secale cornutum and Caulophyllum thalictroides, with grasping and friction over the uterus. No hemorrhage had occurred up to this time, so I prescribed the following:

℞. Com. Powder of Ipecac. and Opium, ʒj.
Caulophyllin, grs. x.
Liquorice, pulv. grs xv. M.

Divide into eight papers, and give one every two hours. Continue taking the syrup of ipecac.

22d. To day she does not cough so much, and expectorates very freely; pulse 115 a minute, respiration 38. A thick dark brown coat on the tongue, red at the end and edges. She has considerable pain in the head, and is somewhat delirious. I continued the above treatment, and in the meantime had the assistance and counsel of Dr. P. We determined to administer Secale cornutum, with grasping and friction over the uterus to arouse uterine contractions and expel the placenta, but all in vain.

8 o'clock P. M. She had several feeble pains, and by aiding, the placenta was removed, being twenty-four hours from the expulsion of the fœtus.

23d. Tongue, pulse, respiration, and febrile excitement about the same as yesterday, bowels move regularly and urinates freely. Is yet somewhat delirious and intolerant of light.

℞. Syrup of Ipecac. f℥j.
Syrup of Senega, f℥j.
Tinct. Sanguinaria, f℥j.
Tinct. Lobelia, f℥j ss. M.

Dose a fluid drachm every three hours.

For a uterine tonic and the febrile symptoms I gave:

℞. Comp. Powder of Ipecac. and Opium, ʒj.
Caulophyllin, grs. x.
Gelseminum, grs. vi.
Liquorice, grs. xjj. M.

Divide into ten papers, and give one every three hours.

24th. Is improving considerably; continue the treatment.

25th. Is improving rapidly, continue taking the syrup and:

℞. Sulph. Quinia, grs. xx.
Hydrastine, " x.
Cornine " x.
Prunine, " x.
Sugar of Milk, ʒj. M.

Divide into ten papers and give one every five hours.

26th. Is still improving. The last treatment was continued until December 5th, although the medicine was given at longer intervals, and occasionally had medicine administered for her liver, kidneys and bowels, as they required.

THE TREPHINE, AND THE INDICATIONS FOR ITS USE.

BY PROF. HOWE.

For a period of upwards of two thousand years an operation has been performed for removing circular discs from the cranial walls that the parts beneath might be viewed, and the escape of foreign bodies facilitated. The instrument used at first was called a Trepan, and resembled a carpenter's *brace*, but a more modern instrument, known as a Trephine, has been in use by the profession generally, for a great number of years. Its action, as well as that of a modified trepan, will be spoken of hereafter in this article.

The Surgeons of antiquity were in the habit of resorting to the operation of cranial perforation in almost all severe cerebral injuries, and the unscientific practice was continued until about the beginning of the present century. The operation was performed even when no symptoms of *compression* existed. The trepan and trephine were applied for the relief of cephalalgia, epilepsy, paralysis, and several other diseases of doubtful origin and location. As late as 1846, in the *Boston Medical and Surgical Journal*, there is a case of trephining reported for the cure of a neuralgic affection of the head. Not many years since M. Ramsden of Paris, trephined the frontal bone for the relief of a simple supra-orbital pain, but was obliged to witness the death of his patient on the fourth day afterwards, from meningitis excited by the unwarranted operation.

From the unfavorable results that attended or followed the frequent operations of the ancient surgeons, the practice of trepanning or trephining has fallen into disrepute, and justly too, perhaps, for there are but few cases of cerebral injuries, according to the opinions of the most experienced practitioners of the present day, that demand such severe interference. The symptoms that require the operation of trephining are those which attend severe injuries of the head, and indicate what is commonly denominated "compression of the brain."

A fragment of bone, coagulum of blood, or collection of purulent fluid presses upon the cerebral mass, and produces a disturbance of its functions. The use of the trephine is expected to afford room for the use of an instrument called an elevator, or lever, to raise the depressed bone, or furnish an opening for the escape of the coagulum, or collection of fluid, and when there is a reasonable hope that the operation will accomplish this, it should be performed. Yet the symptoms are often exceedingly vague, and uncertain in their character. And, if they are plainly manifested, it is by no means certain as to the exact location of the offending cause, especially if it be a collection of sanguinious or purulent effusions. The situation of the external injury cannot be relied upon as indicating the place where the pressure is being produced. Frequently when force is applied to the top of the cranium, from its arched form, it will be transmitted to its abutments, and produce indirectly, by what is called the "counter-stroke," or "contre-coup," a fissured fracture of the occipital or sphenoidal bones, or of those occupying the base of the cranium. Although there be no bone depressed in the case, blood-vessels are likely to be ruptured, and the extravasation that follows will furnish material for compression. The compressing agent in such a case is diametrically opposite the point of injury. The use of the trephine in such cases is inadmissible, even if the location of the coagulum could be determined. A blow upon one temple may produce a fracture of the opposite side of the head, or a rupture of the middle meningeal artery, which would pour out blood between the cranium and the dura mater, or between the meninges of the brain, exciting compression of the organ. The use of the trephine at a point where it was not certain that the effusion existed, would complicate the injury, and increase the danger by increasing the risk of meningitis. Cases of alleged mal-practice not unfrequently arise from cases of this kind, or errors of diagnosis in injuries of the head. And medico-legal difficulties grow out of differences of opinion existing in the minds of the medical experts called in to examine cases of violence occuring in personal conflicts.

Extravasation of blood, and consequent compression of the brain may follow great mental excitement, or violence to the head, with or without fracture of the cranium, and without any external marks of violence upon the head. Yet the physician is not to use the trephine unless the situation of the coagulum be clearly defined, a degree of correctness that could not be arrived at once in a hundred times. Then too, persons laboring under compression of the brain will many times recover without any operation, especially if the base of the brain, and the medulla oblongata be not encroached upon by the coagulum. The clot in such cases becomes organized, and the brain pressed upon, absorbed.

Generally the distinction between concussion and compression of the brain, is not clearly made out. Compression is characterized by general insensibility, a slow full pulse, and stertorous breathing. The breath is expelled with a peculiar whiff or puff, that is probably due to a paralysis of the muscles of the pharynx and soft palate, as well as those of the cheeks and mouth. All these symptoms are present in an ordinary case of apoplexy, and are familiar to most practitioners.

In concussion the symptoms are directly opposite those of compression, except as regards the insensibility. The respiration and circulation are weak and hurried, and the pupils are generally contracted. In compression the patient can easily be roused from the heavy stupor that is present, yet in concussion shaking and loud speaking arouse him, and a degree of consciousness is temporarily restored, during which something brilliant is often spoken. But the patient will sink into a relapse of insensibility, and continue so for hours unless disturbed.

In post mortem cases of compression an examination reveals a lesion of the cranium, brain, its meningies, or of the blood-vessels ; but in cases of concussion no cerebral lesion is made manifest. There seems to be a molecular change of the nerve mass, which interferes with the functions of the organ.

Drunkenness will sometimes appear like compression of the brain, and when it occurs with it the complication renders the case very obscure. If drunkenness be suspected the circumstances of the case will generally reveal the true nature of things, or time at any rate will indicate the true state of affairs, by allowing the effects of the liquor to pass of. And, too, the odor of the intoxicating beverage could be detected in the breath of the individual laboring under the ambiguous symptoms.

The ancient method of determining the exact point of sanguinious effusion by applying a cataplasm over the entire surface of the scalp, and then observing which part of the topical application becomes dry first, is of no practical value, and will correspond with many of the absurd notions of the barbarous ages in which the use of the trephine was recklessly applied in the treatment of all obscure diseases, and severe injuries of the head.

The successful issue of several cases reported, after six or eight perforations of the cranium with the trephine, afford no evidince that such practice should be repeated, but simply show, how much the human constitution will sometimes endure under the most adverse circumstances.

In the treatment of epilepsy the trephine has been resorted to many times both in this country and abroad, but the results, though flattering in many cases, have not been sufficiently favorable and satisfactory to warrant its repetition in the management of that disease. Some years ago in certain insane asylums the operation of trephining was performed upon some of the lunatics, under the impression *that their brains were too large.*

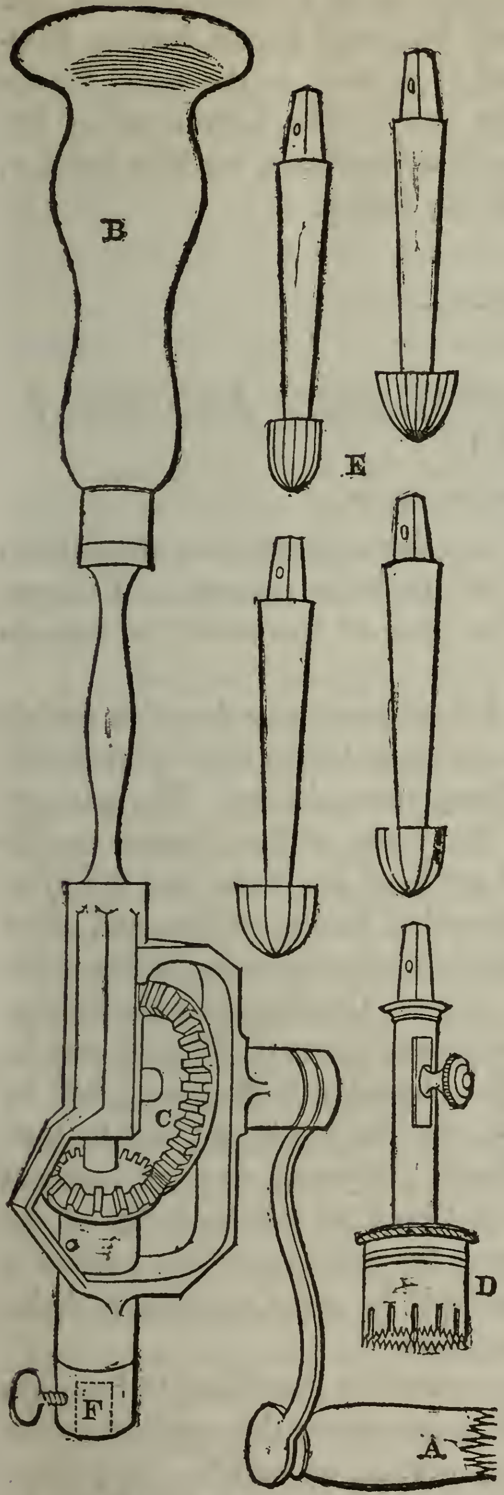
The judicious treatment of a case of compression of the brain, must depend much upon the symptoms and surrounding circumstances. If the stupor and other symptoms be due to pressure made upon the organ by a depressed fragment of bone, the trephine must make way for the use of the elevator. But if no fracture of the cranium be found, and the stupor, and symptoms of compression steadily increase, it may be presumed that the compressing cause is sanguinious extravasation; and, the situation of which being beyond the limits of certainty, no operation should be performed. To perforate the skull for the sake of exploration would be hazardous in the extreme, and exemplify a couplet from Hudibras:

> "As if a man should be dissected,
> To see what part is disaffected."

The "let alone plan of treatment" generally succeeds best in such cases, although a proper use of stimulants and rubefacients may assist in the restoration of the vital energies, which are temporarily suffering from the nervous shock.

All the upper portion of the cranium may be perforated with the trephine, except that part of the temporal regions which have passing through them the median meningeal arteries. Before the application of the perforating instrument the scalp should be shaved, and if not lacerated badly, may be divided with a crucial incision and dissected up *only* to the extent of allowing of the free movement of the crown of the trephine on the bone. Further dissection would be unnecessary, and favor exfoliation of the bone.

The incision should be so made that the centre pin of the trephine may rest upon the firm undepressed cranium, and allow the crown to cut partly from it, and partly from the fragment. And during the operation the centre pin should be withdrawn as soon as a groove is cut deep enough to steady the instrument. If it were allowed to remain it would pierce the dura mater before the disc of bone was freed. And the instrument should be taken away from time to time, while perforating the internal table, to test the depth of the channel, that the crown of the instrument do not go through on one side and injure the dura mater before the other side is separated. The ordinary trephine is a circular saw that cuts by alternately pronating and supinating the hand as the handle of the instrument is grasped like that of a gimblet. Perhaps the greatest objection to it is in the slowness with which it cuts. On that account various mechanicians have attempted to supply the medical



A, handle of crank.
B, upright portion, or stock, which is to be steadied.
C, cog wheels.
D, trephine.
E, osteotome in various sizes.
F, the part into which the trephine or osteotomes are fitted.

profession with an instrument that will cut much more rapidly, and be adapted to a greater variety of uses. Thompson Foster, Esq., of England, has devised an improved Trephine and Osteotome, which has been adopted in several of the English Hospitals, and is in every respect superior to the ordinary trephine.

As it can be best described, and understood from a diagram, one is here introduced, with reference to the various parts of the instrument below it.

As will be seen, the trephine and osteotome can be used on the same shaft, as may be required, and be made to revolve by means of the crank and cog-wheels. The requisite amount of feeding pressure can be applied upon the upright shaft, which also serves to steady the instrument. Whenever it becomes necessary to perforate the femur, tibia or other bone, for the purpose of evacuating pent up fluids, or to *resect* a bone for caries or necrosis, the osteotome may be used instead of the trephine, the different sizes can be used according to circumstances. The practical surgeon often is obliged to drill into the bones, and the ordinary trephine fails to fulfil all the indications required from such an instrument.

In 1853, Dr. Bryan, editor of the *Philadelphia Medical and Surgical Journal*, called the attention of the profession to a "new trephine," which was a modification of the

French instrument and a common *brace* or *bit* of the carpenter and joiner. It is quite similar to the old fashioned trepan, having however, a crank and cog-wheels instead of a crook in the stock, for the motive power to be applied with the hand. The instrument of Dr. Bryan is more desirable than the ordinary trephine, yet it is inferior, in many respects, to the invention of Mr. Foster.

SYPHILIS—ITS PRIMARY APPEARANCES AND TREATMENT.

BY A. B. JACKSON, M. D.

In a previous number of this Journal there appeared an article from me on the Origin of Syphilis. In this I intend to present the Primary appearances of the disease, and a good plan of treatment for it in its early stages.

Syphilis is commonly communicated from one sex to the other during sexual intercourse, though it may be exchanged from one individual to another by inoculation, or by hereditary transmission. The parts of the organism that oftenest receive the virus of the disease, are the delicate mucous surfaces of the glans penis of the male, and the nymphæ of the female. These being distended during coition, and often abraded, are rendered more susceptible to the introduction of the syphilitic poison at that time, than at any other. Consequently the contagion is apt to be spread by impure contacts, however different may be the alleged causes of the patient. The physician is frequently told by the one applying to him for treatment, that he knew not how he took the complaint unless from some infected privy seat, or other innocent manner. As much of such tales is believed as the credulity of the physician will admit, and in rare cases the assertion of the patient is worthy of credit. Syphilis manifests itself in *vesicle*, *chancre*, *bubo*, and *secondary* or *constitutional symptoms*.

The *vesicle* generally makes its appearance in from three to five days after an impure connection, and at the point where the syphilitic virus has fixed itself beneath the mucous membrane, or cuticle. It is very delicate, and filled with serum, and when it is broken a red inflamed spot is noticed. This gives rise to considerable itching, tingling, smarting, and burning ; and all of which combined, call an abnormal amount of blood to the part, so that an unusual turgescence of the enital organs is induced, and not unfrequently a degree of erotism is excited. The afflux of blood tends to develope the incipient pustule, and soon a yellow fluid or pus is discovered in a little ulcer, which takes the name of *chancre*. This ulcer when noticed, is perhaps not larger than half a buck shot, and shaped like an acorn shell, having an excavation, and a dense surrounding wall of effused lymph. The hard borders undoubtedly prevent in some measure the absorption of the pus, and a consequent contamination of the entire body.

The purulent contents of the chancre contain the virulent principle, and when introduced into the circulation as the vaccine virus commonly is, will produce another chancre in every respect like the original one. Nor does it always have to be introduced into the circulation through an abrasion, but when left under the prepuce of the male, or within the labia of the female, and there nourished by the warmth and secretions of the parts, it seems to possess or acquire virulence enough to penetrate the delicate coverings of the genitals, and excite a syphilitic action.

A chancre will not generally heal of itself, but its tendency is to enlarge its borders by corrosion of the tissues, and the vital efforts are not able to stay it until a great part of the external genitalia are ulcerated away. When the ulcerative process is very active the chancre is called *phagedenic*, on account of its feeding or destructive tendencies. This variety—for I regard it as such—of chancre is characterized by great irregularity of shape, and depth, being apt to burrow, leaving ragged edges, and often destroying bloodvessels of considerble size, causing alarming hemorrhage. The pus which this variety of ulcer secretes is not thick and cream-like, but ichorous and corroding.

Primary syphilis attacks the external parts of the organs of generation, and not the deep mucous surfaces like gonorrhœa. A chancre rarely gets into the urethra of either sex, except for a short distance, by spreading from the meatus urinarius. Yet from the exposed condition of the walls of the vagina to the air, and the fact that the syphilitic virus is sometimes deposited far in that tube, even upon the neck of the uterus, chancres will sometimes form deep in the female organs of generation.

It is not a difficult matter to treat a simple chancre in its early stages, but often several will form at a short distance from each other at about the same time, and spread until they unite into one extensive ulcer, which will require energetic treatment to prevent a serious loss of parts from the sloughing character of this disease. And the complications that frequently attend an advanced state of this disease serve to thwart the measures adopted for a cure, and discourage the physician and patient.

Occasionally a large chancre which has existed for some time beneath the prepuce or behind the corona glandis, will have caused so much lymph to be thrown out, and granulations to spring up as to prevent the prepuce from being retracted without exciting the most intense pain. The best way to manage such a case is to put the patient under the influence of an anæsthetic and turn the prepuce back, and treat the chancres to such local applications as the parts seem to demand while he is unconscious of pain. To slit the prepuce up with scissors or the bistoury would deform the organ, and risk the free cut edges to an attack of the disease. To perform circumcision would be equally unjustifiable. When the parts have been treated under such circumstances the prepuce should be returned to its natural state or the organ will become congested, and strangulated, producing that condition of the organ called paraphymosis.

There are certain diseases of the genital organs that so resemble early appearances of syphilis that an unexperienced practitioner might be misled in forming a diagnosis. One of these diseases is *eczema* of the lining of the prepuce, and the covering of the glans penis. It is characterized by a vesicular eruption that resembles the vesicles preceeding chancre. When any difficulty exists in making out a diagnosis, time will reveal the true state of affairs, for the vesicles of eczema will soon subside, and, though a new crop succeed the first, no deep ulceration ever results from them. Then, too, there is a real *herpes* which may attack the genital organs of both sexes, and an inexperienced observer might mistake it for syphilis. Neither of these diseases are obstinate to treat, both readily yielding to cleansing and astringent washes. An eczema in the male sometimes arises from connection with a female of filthy habits, or one troubled with an acrid discharge from the vagina.

As has been before suggested a chancre generally appears in a few days after an impure connection, but there are exceptions to this rule. An acquaintance of the writer being thrown from a carriage, received a fracture of the thigh, and soon after he complained of a gonorrhœa, which was treated, and cured within a few days, for it was not an obstinate case, and at the end of thirty days, or thirty-five days from a suspicious sexual intercourse, he had a well marked chancre form on the inner surface of the prepuce, near the frænum. The ulcer had an indurated border, and in its cavity a thick, heavy pus, and all the appearances of a true "*Hunterian* chancre." To satisfy myself more particularly in regard to the case, and for the sake of the fact, I introduced by permission of the patient, some of the virus on the point of a lancet into his arm. In six days an ill conditioned ulcer formed there, which seemed to have all the characteristics of the original sore. I am satisfied that the patient had no exposure to the disease after the injury of the limb.

Taken in connection with the reports of medical writers, such a case in the practice of any one would tend to strengthen an opinion held in conformity with their testimony. The virus must have remained dormant beneath the prepuce, in the secretions of the parts, until it was called into activity by some circumstance favorable to its developement. Cases of similar import are occasionally observed after persons have een many days, weeks, and even months at sea, when there was no possibility of an infection on board the vessel.

Treatment of Primary Syphilis. A way—if not the best—of treating the first appearance of this disease, is to puncture the vesicle, or incipient pustule, and apply a small quantity of nitric or muriatic acid, and afterwards dust upon the part as an absorbent, some pulverized chalk or charcoal; and allow it to remain undisturbed for a couple of days, when the parts may be examined, and treated again with the same applications, if the vesicle or pustule wear an unhealthy appearance, or has become developed into a real chancre. In almost every case however, the first application will prove sufficient to overcome the disease. No internal treatment will be necessary, for the disease was local, and did not have an opportunity to become constitutional.

If the disease be so far advanced before it is seen as to have a well developed chancre, there are two effectual methods of treating it, either of which may be relied on. The one consists in grasping the borders of the ulcer with a pair of toothed forceps, and excising it with curved scissors. The cavity left after the indurated mass is taken out, should have applied to it the muriated tincture of iron, to check the bleeding and change the character of any vitiated fluid that may be left behind. In a few days the simple wound—for it is nothing more—will heal, and no constitutional medicine need be given, unless, as in some rare cases, a bubo appear, or constitutional symptoms manifest themselves. The daily application of a small pledget of lint wetted in a dilute preparation of the iron mixture, will constitute all the dressing that is demanded. The other advisable way of treating a chancre, is to cauterize it with the same acid recommended for the primitive vesicle. The acid may be applied with a camels-hair brush, or with a bit of wood formed like a pencil-stick, rounded and smoothed at the end. This is to be dipped in the acid at full strength, and applied to the excavation of the chancre, until its surface seems to be entirely changed. To complete the dressing the absorbent powders previously mentioned or a piece of charpie wetted in the iron mixture, is all that the good management of the sore demands. One or two acid dressings, and a repetition of the iron mixture for a week or two, will cure almost any case. The syphilitic ulcer will be changed to a healthy sore, and it will granulate and heal without any untoward symptoms. No *black wash*, no *mercurial* preparations of any kind are needed in the case.

The sloughing or phagedenic chancre needs the acid dressing every six or eight hours, for two or three times, when the muriated tincture of iron will hold the disease in check, and render the tissues favorable for the healing process. To prevent constitutional symptoms in cases where the syphilitic virus may have been absorbed let a weak, scrofulous patient take four times a day a teaspoonful of a medicine made from the following prescription.

℞. Syr. Corydal. Comp., f℥iv.
Potass. Iodid, ʒiij. M.

And if the patient be of a plethoric habit, the same quantiy as often repeated, of the following, will prove more efficient than Iodine mixture:

℞. Syr. Stilling. Comp., f℥iv.
Auri Chlorid. et Sodii, grs. ij. M.

This preparation probably has greater anti-syphilitic virtues than any other remedy now in use, and the medicinal preparations of gold will undoubtedly soon take the place of the mercurials, in the practice of the more liberal of allopathic physicians. And, as the remedies of botanics have generally failed to prevent constitutional symptoms of syphilis, or overcome them when they have already appeared, it is to be hoped that they will yield their prejudices to the use of minerals sufficiently, to employ preparations of Gold and Potassium, in the treatment of this destructive disease.

During my early studies, my attention was called to a case of constitutional syphilis affecting the throat of a patient at that time, and during an attack of the primary disease, under the care of my preceptor. He applied the nitrate of silver stick to the ulcerated fauces, and gave internally tinctures, syrups, and decoctions of smilax, stillingia, alnus and other highly esteemed *alteratives*, but they did not stay the disease; and after five months of such treatment, the *patient* passed into the hands of another physician, who ran into another extreme of practice, and salivated the poor fellow, without curing him, until his teeth rarely adhered to his jaws, and his breath was more offensive than the noisome exhalations of an alligator's maw. I have since had opportunity to observe many cases presenting both these extremes, but for many good reasons have avoided them, and adopted the *golden* mean.

EDITORIAL DEPARTMENT.

CLOSE OF THE WINTER SESSION.

On the 18th of January, the winter Session of the Eclectic College of Medicine was brought to a close. The exercises of the evening were spoken of by the Daily papers of the City, as possessed of uncommon interest, and highly gratifying to the large audience present. The Report made by the Dean was as follows:

The Eclectic College of Medicine commenced its career in the winter of 1856–7, having been legally incorporated, according to an act of the Legislature of this State. At its first session, in the winter of 1856-57, there were sixty-nine matriculants, upon twenty-nine of whom the degree of Doctor in Medicine was conferred, by authority of the Board of Trustees of the College; the Honorary degree being also accorded to two gentlemen. In the spring session of 1857, there were thirty-eight matriculants, eighteen of whom received the degree of Doctor in Medicine; the Honorary degree being conferred upon five gentlemen. During the winter session of 1857-58 notwithstanding the pecuniary difficulties which have almost prostrated the energies of the whole Union, there have been seventy in attendance, upon eighteen of whom, the degree of Doctor in Medicine is to be conferred this evening, one gentleman, not, however, belonging to the class, receiving the Honorary degree.

From this statement, it will be observed, that since the Incorporation of the Eclectic College of Medicine, a period of some twelve or thirteen months, there have been in attendance one hundred and seventy-seven students, sixty-five of whom have received the degree of Doctor in Medicine, while the Honorary Degree has been conferred upon seven, a result equal to our most sanguine expectations.

[The names of the present Graduates were published in the Journal for February.]

He then added: "At this day it is demanded of the Medical profession to decide, whether its future progress shall be directed by those spirits who do not hesitate to thoroughly and fearlessly investigate all matters presented as truths, without regard to their origin; or by those, who though occupying high and responsible places, would arrogantly exact from others, a servile deference to their views and teachings, and thus perpetuate selfish, bigoted, and corrupt principles. It may, therefore, be proper to state, that one feature in the teachings of our College is, liberality, and forbearance toward all who do not think or act as we do. Our students instead of being taught to confine their thoughts and investigations within circumscribed bounds or rules, regardless of their correctness or falsity, are trained to cultivate and maintain the utmost freedom of mental action; to listen with patience and courtesy to the views and opinions of others, no matter how seriously they may conflict with their own; to test their truthfulness, and adopt them if good, or, if bad, to pass them by without fear or favor.

Our graduates are not called upon to pledge themselves to the teachings of our College, nor to term those, whose opinions upon medical matters vary from their own, "scoundrels and villains;" neither are they threatened—in case their future studies and inquiries lead them to forsake our principles and adopt others more in accordance with the evidences presented to their minds, with a branded "D. D." upon their forehead, to signify "deserters" of the worst kind.

A pledge, like the one referred to, could only be designed to persecute, trample upon, and put down free investigation, whenever and wherever met with. It would bind young men to the most abject mental slavery, it would destroy energy, cripple ambition, paralyze intellectual and scientific culture, and deaden all desire for human welfare. Instead of making skilful and scientific physicians, an honor to the calling, its tendency would be to multiply living medical machines.

False, indeed, must be the principles and practices of those who would protect themselves by requiring such a pledge. Its introduction into our Colleges would be consummate baseness, its presentment an insult and an outrage upon every honorable freeman, its requirement would be a confession of error, of weakness, of decay, of fear, of loss of virtue. Freedom of thought, love of truth, liberality of sentiment, are not impressed upon such an obligation, its whole face presents the imprint of falsehood, mental slavery, and infamy.

It is very difficult to believe that among the many young men who have attended our several sessions, there can be found one so base, so servile, so regardless of his rights as a freeman, so heedless of his duties to himself, to his country, and to his Maker, as to submit to an obligation of this nature.

These few remarks have been presented, more especially, because it has been supposed, by some, that our system of medical teachings was limited and bigoted, and that we bound our graduates to fasten their medical faith upon ourselves, and to recieve nothing as correct unless viewed through the glasses which we have kindly prepared for them.

But the contrary is the case, our students know no bounds in science, they are taught to permit nothing to elude their mental grasp ; and the only obligation required of them, is the common obligation of mankind to that being who made man in His own image ; liberality, forbearance, and fearless investigation, with a sincere desire to cultivate truth, and truth alone."

After the Degrees were conferred, Dr. J. J. Row, on behalf of the Graduating Class gave the Valedictory Address, which was followed by an

ADDRESS TO THE STUDENTS.

BY PROF. T. E. ST. JOHN.

This was the peculiar feature of the evening, and gave great satisfaction. It abounded with excellent practical advise to the Graduates, expressed in appropriate and fitting terms, which will be remembered and acted upon for many years to come. Our space forbids a full report of this Address, but we make room for some extracts, by which the character of the whole may be judged. After an appropriate introduction, the speaker said :

"This is an interesting moment in the period of your existence. As long as the things of this world shall continue to occupy your minds, so long will the remembrance of this hour hold a place in your memory. Your pupilage is now ended, and this night severs the connections and alters the relations that have existed between us. This is a period in which you are not merely passing from one of moment to another, but one, fraught with interest, one in which there may be intense regrets for the future. From this time onward you are travelers in the great journey of Medical Science, and from hence you pass on your benevolent mission to the relief of your fellow-men.

Your pupilage is indeed ended, but your studies are not. They have just begun. The path you have chosen is one of labor and toil. As the "price of Liberty, is eternal vigilence, so the price of wisdom is eternal thought," and your most sacred duty is to acquire it; but it requires action industry and effort, which are the only elements of success.

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It is said :

> " There is a Divinity that shapes our ends
> Rough ' hew them as we may."

And we hear of fate; of destiny ; as something that rules our lives, and controls our lot. It is however, only the indolent mind that is a slave of circumstances. An energetic iron will, is the arbiter of fate. The capability to will a lofty deed goes hand in hand with the power to perform it. The bold design, the intense effort and unflinching industry never fail.

Your studies are but just commenced. Hitherto you have had the assistance of your preceptors, your teachers, henceforth you must depend upon your own resources, by the bed-side, with the suffering, the dying alone, at all times, both night and day, are you to read an unwritten volume. * * * * * * *

Gentlemen, cultivate your intellectual faculties, for therein lies success. You are members of a liberal profession and you should spare no pains to fit yourselves still further to take a place in the society of the wisest and the best. To do this, requires the observance of one great rule. You must think for yourselves. You can read, hear, gather opinions, but think, gentlemen, think for yourselves. Let not the authority of a school, the influence of a great name, the bias of system, the tyranny of culture, or your own preconceived ideas warp your judgement. It is your own thought that developes the energies of the soul, and gives you a true and independent stock in intellectual trade, which is unwavering in character, and reliable in any crisis.

One thought wrung from the hard uncouth facts that are presented to us, is worth all the borrowed ideas that are handed from antiquity; it is our own, it becomes a living idea, it is always good, and always available. In such thoughts there is a power capable of achieving great results, and it is through such, that the memories of their originators become immortal.

Genius is Godlike, talent is admirable, wealth gives facilities, and refined education is excellent, but neither the one nor the other can supply the place of *your own thought*, *or your own industry.*

With regard to hypotheses and systems which at the present time are known by the name of "legion," let nothing induce you to surrender your own judgement, yet at the same time, do not let the pride of profession cause you to treat with contempt remedies of a plebeian origin. It was thought of old that no good thing could come out of Nazareth, and the Medical profession is too apt to imbibe the same prejudice. Allow me to warn you against such narrow policy, as it will cut off many valuable sources of information. The wisest man may learn from the fool, as the bee gathers honey from the poisonous flower. Search far for truth, discarding the tyranny of hypotheses or systems, and whenever and wherever found, hesitate not to embrace it. * *

In whatever location you may select, you will not fail to find yourself useful just in proportion as you have prepared yourself to cope with disease, and the question so far as regards your benevolence and philanthropy, may be very easily determined.

Although it is easy to talk of disinterested benevolence and zeal for public welfare, yet I may venture to say that it would be difficult to point out one among you, who has not *some* reference in his calculations to the pecuniary reward which he is to obtain for the long and extensive course of study he has undergone, and the life of severe and toilsome labor, which he is to lead. The very confident hope of pecuniary reward is by no means an uncommon consideration either as an object in entering the profession, or as a point of inquiry in selecting a location. But he who enters the medical profession with no other incentive to action than his love of the "Almighty Dollar" will be quite sure to see his golden anticipations fade; and far better would it be for him, should he leave that society where his absence would cause no regret, and pursue his speculations in some other channel, where the traffic is not connected with so priceless a gem as the life of his fellow-men.

In your conduct toward the public, the simplest and plainest rules are the best. To give full effect to your attainments, high morality is eminently essential. Integrity constitutes the basis of all enduring reputation, and in its practice you will not fail to command the respect of both friends and foes. The teachings of the golden rule should govern you in all your intercourse with men, it brightens your reputation, increases your influence, satisfies all the claims of earth, and applies itself to Heaven. In all relations in community, take *the* right position and maintain it. It is important that you obtain the respect of the world, but you must remember those only are respected who respect themselves.

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To your professional brethren you also owe an important duty. Be courteous and manly. The greatest difficulty with which you will have to contend in establishing yourselves in business, is the competition of the older members of the profession. It is impossible for you to avoid this, for there is no portion of our country that is not claimed as a field of practice by some veteran in the cause of humanity, and you must prepare yourselves for it, as nothing would be so ruinous to your reputation, as to plunge yourself headlong into a competition that you were not able to sustain. Let me warn you never to attempt to build up a reputation on the defamation of a rival, as you will invariably find that all uncourteous actions and unworthy attempts will only serve to throw the balance in favor of your opponent. The one important point ever to be borne in mind is to make your competition contribute to your own advantage, and this can only be obtained by an honorable, straight-forward, and candid course of conduct. You will be enabled to erect to yourself a solid and enduring reputation, only by uniting to your scientific attainments, industry and strict integrity of professional deportment.

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Again, gentlemen, let me advise you if you would move successfully amid the cares and troubles of this life, if you would maintain a quiet tranquility while bearing all its trials, if you would preserve a cheerful composure under all its mutations, ever bear in mind that there is a God in Heaven who is surrounding you with evidences of his presence and goodness.

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But while I would advise you ever to bear in mind that the surest road to success and fame lies in the performance of every duty both to your God and your fellow-man; let no temptation induce you to unite with a religious society, merely for the purpose of securing popularity. Religion is too sacred a subject to be dealt with thus slightly, and if you approach it do it from a purer motive than self-aggrandisement. Hypocracy of all the crimes that ever blackened the character of man, is the most degrading. It sinks him from his original elevation to the very depth of degredation, and makes him unworthy the very name of man. He despises himself, and sooner or later lowers himself in the estimation of all mankind.

Towards your patients, be punctual, frank and candid. Let it be among your first endeavors to establish a reputation for truth and candor towards the sick. Although you are not required to communicate to them all the thoughts in which you may indulge, yet never attempt to gild over your motives or opinions with any designing evasions. Be careful at all times to guard against flattery, and never attempt to give the probable result of a case, when your opinion must be based only on a mere hope of its subsequent realization; but at the same time endeavor to inspire your patient and friends with as much confidence as possible, consistent with your duty.

In prescribing for your patients, remember that they have minds as well as bodies, and prescribe for them both. A word of kindness, or a look of sympathy, will often cheer the drooping heart and soothe the dying pillow. These simple remedies you can always have with you, and you will ever find them welcome guests to the sick man's chamber.

In that department of your profession that regards the gentler sex, to the performance of which you will often be called, ever remember that to her is due at your hands a degree of esteem and respect, which can be given only in the exercise of the most sterling honor and purity. She is much more frail than her brother man, and yet she bears the heaviest part of the burden of life. Aye, and in her affections too, she is infinitely our superior; she entwines herself around our hearts and bears us up from earth, reminding us of the bright seraphs that surround the upper sanctuary. She is indeed "God's smile upon earth." Be kind to woman. Repay her trust with honor, and give her your kindest sympathies. No man is worthy the name of physician who does not entertain the highest respect for the honor, purity and fidelity of this portion of our race. Without her soul cheering presence, man would relapse into barbarism, and life itself would be but a contemptible drudge, beneath a wintery and perpetual frown.

In your prescriptions avoid as much as possible disagreeable medicines. The sick man's couch is not a bed of pleasure. Disease itself is sufficiently painful without the unnecessary aggravation of drugging draughts and bitter powders. It is your business to sooth his pains and allay his sorrows; more especially will this be the case when the disease threatens to defy all your endeavors, and death claims the victim for his own. It will often be your lot to stand at the bed-side of the dying—when earthly skill has failed—when earthly hopes are fading, and then will you *feel* the responsibilities of your position. But be calm and firm, let kindness mark all your acts, and when you have rendered all the assistance art can bestow, still abide at your post and endeavor to smooth the path that lies through the dark valley of the shadow of death, by pointing to the Great Physician above ,

> "Who hath a balm for every woe, a smile for every tear."

The services of the evening and the Session was brought to a close without the least thing to mar the harmony so markedly shown between the different members of the class, the different members of the Faculty, and between the Professors and pupils; and the attachment between each other, and to the College was continuously and constantly manifested.

A NEW WORK ON SURGERY.

It is with pleasure that we announce, that Prof. A. Jackson Howe, is writing a work on Surgery. Those who have heard his lectures on this department of medical Science will need no commendation of the work. Our readers can judge of the fitness and ability of the author, by his contributions to the College Journal.

BOOK NOTICES.

A Manual of Medical Diagnosis ; being an analysis of the Signs and Symptoms of Disease. By A. W. Barclay, M. D., etc. Philadelphia ; Blanchard and Lea, 1858.

Ten years since Dr. Barclay was appointed Medical Registrator to St. George's Hospital, and during the time he occupied that position more than twelve thousand patients came under his notice. As it was his duty to have kept a full record of each case, he adopted a new Classified plan of record, and that plan has been embodied in the present work, which is in accordance with the one here given.

Outline of the Particulars which a Clinical Clerk ought to attempt to enumerate in the History of each Case which he records.

Address—Name—Age—Sex—Civil State—Occupation—(in Females, number of children—date of last pregnancy—menstrual functions.)

History:
- *a.* Of present attack.
- *b.* Of previous illness.

Present state:
1. General symptoms:
    - *a.* Skin; as to heat and dryness.
    - *b.* Pulse; as to frequency, force and fullness.
    - *c.* Tongue; as to coating and moisture.
    - *d.* Bowels and urine.
    - *e.* Appetite and thirst.
2. Appearance:
    - *a.* Size.
    - *b.* Aspect and expression.
    - *c.* Color.
3. Position or posture.
    - *a.* In bed.
    - *b.* Out of bed—Gait and manners.
4. Sensations.

Survey of regions and organs:
1. Innervation:
    - *a.* Brain.
    - *b.* Nerves.
2. Respiration.
3. Circulation.

  - *a.* Heart.
  - *b.* Blood-vessels.
4. Digestion :
  - *a.* Assimilation.
  - *b.* Excretion—Character of stools—Analysis of urine.

The subject of Diagnosis in the practice of medicine has attracted far less of the attention of the profession than it deserves ; and a want of correctness in that regard, may render the most scientific medication nugatory if not positively injurious.

We observe a diversity of opinion in regard to the nature of the disease far more frequently than a disagreement in regard to the remedies to be used ; and as this must arise in good part from a difference in the modes of diagnosis, it is proper to infer that an increase of knowledge must tend to lessen the differences of opinion and of practice now observable among physicians. This want of agreement in opinion and want of success in practice, doubtless, is sometimes owing to there having been but little information on this important subject, accessible to the great majority of practitioners.

The present work is one which will be hailed with great pleasure by all thinking physicians, who, while they will not agree with the author in all regards, will find in it much to admire, and many hints and ideas which will prove of very great value.

PERIODICALS.

Rankin's Half-Yearly Abstract from July to December, 1857, as reprinted by Lindsay and Blakistone, Philadelphia. This valuable resume of the progress of the profession during the six months past, is rich with interesting and important matter, in a form exceedingly con. venient to the practitioner.

British and Foreign Medico-Chirurgical Review.—The January Number of this valuable Quarterly has been promptly issued by the publishers, the Wood's of New York. It fully sustains its former well-earned reputation.

American Journal of Insanity.— The January Number of this periodical is one of the most valuable, as well as beautiful of our exchanges.

Tulley's Materia Medica.—The 24th part with a Title page aad Index for the First Volume, of 1534 pages is published.

American Druggist's Circular.—The February Number of this valuable periodical is at hand, filled as usual with matter of deep interest to the profession. The *Wholesale Department* of this Journal is of great value.

The Scalpel for February, like its predecessors, evinces the peculiar tact and talent of its world-renowned Editor, Dr. Dixon.

EDITORIAL ABSTRACTS.

Bleeding.—A controversy between Dr. Thomas Watson, and Dr. J. Hughes Bennet, in regard to Blood-letting, has found place in the *Edinburgh Medical Journal.* A reference to this controversy was made in the COLLEGE JOURNAL for October last.

In replying to Dr. Watson, Dr. Bennet observed:

"I argue against the general opinion of Cullen and Gregory, as to large bleeding in internal inflammations, not only because they were incapable of separating pneumonia from other inflammations of the chest, but because, so far as we are capable of determining, *their practice was a fatal one;* because those who have imitated it and carefully examined the results, have it so (Louis, Dietl); and because those who have abandoned it declare that not only do their cases get well as soon, but sooner, when blood-letting is not practised. Now I can find no facts or arguments to controvert this position among the statements of my opponents.

I am aware that the general *belief* is, as Dr. Watson states, that inflammation may be cut short or delayed by" [what is called] "antiphlogistic regimen and remedies, but every well observed fact is *opposed to such belief*, and all those who have carefully studied pneumonia in reference to this point, are satisfied that bleeding lengthens, rather than shortens the progress of the case. (Louis, Grisolle, the Vienna physscian.)"

Rickets—caused by bad bread.—In a recent paper, Dr. Snow says that he has observed that rickets is a very common disease among the children of those who use *baker's bread*, he concludes it may be owing to the *alum* with which such bread is always adulterated. This is in accordance with the well known chemical action of alum, since that salt forms combinations with the phosphoric acid which *should* unite with lime to form the bone, which combinations are but little tenacious but are decomposable by any of the alkalies or acids that are in the system.

Salt in Milk for Children.—Dr. Gumprecht and others think that salt added to the milk of cows, makes it much more nutritious and digestible. To make cow's milk fit for food for infants, it should be boiled, skimmed, and a little of both salt and sugar added to it.

Bromide of Potassium.—Sir Charles Locock says, that some years since he found that by taking tengrain doses of the bromide of potassium three times a day for about a fortnight he became impotent, but on leaving off the medicine his powers returned. Similar trials of the agent on others produced similar results. This led to the use of the salt in Hysteria and hysterical Epilepsy. He has tried it in fourteen cases of hysterical epilepsy and it had failed in only one, and that had no fits except at the time of menstruation.

Chlorate of Potassa in Leucorrhœa and Ulceration of the Os Uteri.—Dr. Brown relates four cases of leucorrhœa with ulceration of the os uteri, in which he employed injections of a drachm of the chlorate of potassa to half a pint of water. The solution of the chloride of zinc of the strengh of ten grains to a half a pint of water, has also proved very servicable, used as an injection.

Cancer of the Lip.—M. Chapel has observed that nine out of ten who had cancer of the lips are males. As most of the patients observed by him were smokers of tobacco, he thinks the use of pipes or cigars and the *heat* they impart to the lips, a frequent cause of Cancroid disease. M. Begin, who was appointed by the Academy to examine the paper of M. Chapel fully agrees with the author.

Chlorate of Potassa, a Sialagentic Agent.—Dr. Bethan say that its electric action on the bucco-pharyngeal mucous membrane, as a stimulant, is well marked. It checks mercurial ptyalism promptly and certainly. It is of great value as a topical remedy in ulcero-membranous stomatitis, and is a very valuable in removing fibrinous exudation accompanying angina. It is also one of the most trustworthy medicines in diphtheritis and gangrene of the mouth.

Cause and Cure of Tuberculosis.—Dr. Churchill maintains, that the proximate cause, or at least an essential condition of the tubercular diathesis, is a decrease in the system of the amount of *phosphorus* which it contains in an oxygenizable state.

The specific cure of this condition consists in the use of a preparation of phosphorus, in such a condition, that it can readily supply that want.

The hypo-phosphites of Soda and lime have of late been used for the purpose of supplying the want, but not a sufficient number of reports have been published to determine the value of the treatment.

Guaiacum in Cynanche Tonsilaris.—Dr. Bruiton of the Royal Free Hospital, says he has treated tonsilitis by the use of guaiacum for several years, on the idea that the tonsils are an offshoot of the alimentary canal, and that the inflamed structures are best relieved by free catharsis. For this purpose he gives guaiacum in large doses (20 to 60 grains) in powder, with the addition of aloes or jallop, and suspended in mucilage. These doses are repeated every four hours until the activity of the disease is subdued. The convalescense is very rapid and strikingly in contrast with those cases treated by bleeding, or tartarized antimony and potassa, and blisters.

Achille Millefolium as an Emmenagogue.—The domestic use of the Milefoil for the purpose of restoring the flow of the menses when suppressed, led Dr. Ronzier-Joly of Clermont, to try it in his practice. He gave a strong infusion of it each morning for three or four mornings in succession. When the suppresson was produced by mental emotion or a transient cold, it would sometimes reappear in a short time after the administration of even the first dose.

A similar use has been made of Chamomile flowers, and the herb of the Crysanthmum, as well as other plants of the aromatic bitter class.

Tubercle.—A writer in the British and Foreign Med. Chir. Review, expresses the opinion that: "Whether tubercle consists in a fatty degeneration of epithelium, in exudation of unorganizable fibrine, or an excessive production of epithelial *debris*; the efficient cause of the disease is to be found in the prolonged inhalation of a vitiated atmosphere."

Fibrine.—In the recent work of Rudolph Virchon, Professor of Pathological Anatomy and Physiology at the University of Wurzburg, he says that from his own researches and those of others he is led to infer; "That in none of the animal fluids perfect fibrine pre-exists as such; but that the blood, as also the lymph and lymphatic fluid, contain a substance nearly allied to it that of the former more, that of the latter less so, which substances *by the contact of oxygen* become transformed into fibrine, and then coagulate." Zimmermann in his late work repeats his formerly expressed opinion, that: "Fibrine is an excrementitious substance, exhibiting a certain stage in the metamorphosis of proteinaceous bodies, not any longer fit to serve in the nutrition of the organism."

Erysipelas—Its Nature.—H. P. Bird, the author of the Jacksonian Prize Essay on Erysipelas says: "That erysipelas is an example of that diffuse inflammation which constitutes inflammation of the mucous membrane, diffused phlebitis and puerperal fever;—all of which have a common origin a poison in the blood, are infectious and contagious, and may mutually produce each other. He also confirms the remarks of Gulliver and Williams, that in erysipelas there are at times, pus globules in the blood in parts of the system remote from the seat of the inflammation.

Compression for the cure of Popliteal Aneurism.—In a report by Mr. Key of London in regard to the progress of surgery, he has endeavored to show that the object of *modern* surgery is to repair and restore, rather than to mutilate and destroy. Hence when speaking of aneurism, he asserts that the compress has taken the place of the knife. The operation for popliteal aneurism he thinks is about to be numbered among the relics of the past.

MISCELLANY.

TILDEN & CO'S POWDERS.

The preparations of the well known house of Tilden & Co., which were mentioned on page 96 of the present Vol. of the College Journal, have been examined with sufficient care to lead to the conclusion that those named "Hydrastina," "Jalapin," "Scutellarin," "Sanguinarin" and "Xanthoxolyn," are valuable and desirable preparations, but some of them are wrongly named, as the "Hydrastina" is doubtless *Hy-*

drastic acid, while that named "Sanguinarin" is a salt, the alkaloid of the blood-root acting as a base and being precipitated by a salt.

The "Podophyllin" looks like that manufactured here, and is probably as valuable ; the "Leptandrin" *looks* like an inert, insoluble preparation of the root, but we have made no trial of it.

In all there are *seventeen* powders, neat in appearance, and doubtless manufactured with great care, and as valuable as those made elsewhere; but we think the Tildens will find, what many of the profession are already assured of, *that the fluid extracts are the best form yet devised to make most vegetable preparations for use as medicine*, and that many of them cannot be reduced te powders by any process yet known without a sacrifice of some of their most valuable medicinal powers.

Messrs Tilden & Co., are known throughout the world, as making reliable and pure preparations in the form of *Fluid and Pillular Extracts*, and doubtless the same care and honorable attention is bestowed on these preparations, which are very convenient, if less useful than those heretofore made.

In the matter of *nomenclature*, we would suggest more regard to the usages of science. Let all Alkoids end in *a*, as do Soda, Pctassa etc; all Acids end in *ic*, as Nitric, Sulphuric, Mallic etc; all resinoids end in *in*, as Resin, Rosin, etc., while those which are neutral, or undetermined may end in *ine*, as Piperine, Cornine, etc. Most who have given names to these preparations have done so with an amusing disregard to the rules of science and of language.

DR. DANIEL HIGBIE,

Whose name was mentioned in the College Journal for December last, has written us and settled his affairs entirely to our satisfaction. We still desire to know the whereabouts of Dr. W. W. Ingalls formerly of Olive Branch, Clermont Co., Ohio, as our collector has been unable to obtain the pay on our demand against him.

MARRIED.

On February 2nd. in Paxton, Mass., Prof. A. J. Howe, of Cincinnati, O., to Miss Georgianna, daughter of Geo. S. Lakin, Esq., of the former place.

In Weedsport, on the 17th day of Nov. 1857, Dr. H. A. Peterman, M. D., of Weedsport, to Miss Amie S. Slout, M. D., both graduates of the Eclectic College of Medicine. May their united future be as prosperous and happy, as their past has been honorable.

THE

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OF MEDICAL SCIENCE.

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ORIGINAL CONTRIBUTIONS.

AMYLENE.

BY PROF. CPEAVELAND.

For six or seven years the Journals of Chemistry and Pharmacy have made mention of Amylic Alcohol, Amylic Acid and other preparations of like name, and the "oil of whiskey," the peculiar substance which gives the recently distilled liquor the pungent penetrating odor, which although accompanying the alcohol is entirely distinct from that which alcohol gives out.

This peculiar odor proceeds from the "fusel oil," or the hydrated oxid of amyl, which separates from the alcohol during the process of distillation, and which may be obtained in a pure state by distilling the milky fluid of the still, and thus separating it from the impurities with which it is mixed, and insuring a more perfect admixture of the substances of which it is composed.

If to pure fusel oil, chloride of zinc be added, and they are heated, they at first mix together, and as the heat rises to about 265° F. a vapor is thrown off which may pass over in the condensor, and may be collected. If the fluid is re-distilled a part goes off when the heat is no higher than 140° F.; but the boiling point of the remainder is finally as high as 570° F.

If the volatile parts are agitated with strong sulphuric acid a colorless and very volatile liquid will rise to the surface, which is that called *Amylene.* This was first discovered in 1844 by M. Balard, of Paris. Its chemical formula is $C^{10} H^{10}$.

The specific gravity of amylene is very low, being according to Dr. Snow only 0.659 at 56° F. Another preparation to which the same name was given, had been made known in 1839 by M. Cahours, but that substance is now known as paramyline.

In tracing the history of the use of anæsthetics up to the introduction of this, we should not omit the remark published more than fifty years ago by Sir Humphrey Davy: "As nitrous oxide in its extensive operation seems capable of *destroying physical pain*, *it may probably be used with advantage during Surgical operations*, in which no great effusion of blood takes place." Although this remark is clear and explicit, we have no account of a trial of this or any other gas for the purpose so ardently desired by all humane surgeons, until nearly forty years later Mr. Wells, a dentist of Hartford Conneticut extracted teeth from patients after they had inhaled it.

In 1846 Dr. Morton of Boston, who had formerly been a partner of Mr. Wells and doubtless witnessed the experiments of Mr. Wells with Nitrous Oxide, administered the vapor of Sulphuric Ether, first to suppress the pain of tooth-extracting in his own office, and then in surgical cases in the Massachusetts General Hospital.

It has been customary for many years for students in Chemistry to take internally the Chloric Ether to induce speedy, profound and transient inebriation. In 1847 Jacob Bell used this so-called chloric ether in place of sulphuric ether, to produce by inhalation insensibility to pain. As it had a far less unpleasant odor, it was in that regard preferable to sulphuric ether, but it was found somewhat uncertain, owing to its variable strength. In the autumn of 1847, M. Waldie of Liverpool explained to Dr. Simpson of Edinburgh, that the supposed chloric ether was really a solution of Chloroform in spirit, and Dr. Simpson obtained some pure chloroform and used it with wonderful satisfaction and success.

The use of chloroform early attracted the attention of Dr. Snow of London, who has instituted a vast number of experiments in the application of anæsthetics to animals and to men, and has published very valuable rules for our guidance in their administration.

Dr. Snow conceived as probable that there were other agents more valuable as anæsthetics than chloroform, and his explorations led him to the conclusion, " that the agents which may be inhaled for the prevention of pain, in the absence of others which are more eligible, are *extremely numerous*. They include, among other things carbonic acid and cyanogen gas; which last is contained, as I found, in the fumes of the puff-ball which Dr. Richardson has brought before the notice of the Medical Society of London" [and which has been used in this country many years by farmers to stupify bees, to take away their honey.]

The agents which Dr. Snow has exhibited as anæsthetics to animals, are very many, while to men he had tried nitric ether, Dutch liquid, benzole, a bichloride of carbon, the monochlorinated chloride of ethyle, and *Amylene.*

The first experiment in the use of Amylene as an anæsthetic on man he made on the 10th of November 1856. He had first fully tested its powers on the lower animals. On the 4th of December it was administered to four more persons, and in less than six weeks near seventy operations were performed in England under its influence.

In February, 1857, Mr Aran of Paris made a trial of it when it failed. M. Giraldes of the Foundling Hospital however succeeded better, and then the Academy of Medicine at Paris appointed a committee consisting of M. M. Robert, Velpeau, and Malgaigne, to examine into the merits of amylene as an anæsthetic. Their report was publised in May last. The conclusion at which they arrived, was, *not* that it should be substituted for chloroform in all cases, but only in those where the operation should occupy but a brief space of time.

The Report was based on the peculiar properties of the agent as an anæsthetic, which are as follows: It is far less soluble in the animal fluid than chloroform, and hence a far larger quantity must be used to produce insensibility, as, owing to its comparative insolubility, a great part of the vapor inhaled is again expelled from the lungs without being absorbed into the blood. Even the small quantity which is absorbed does not readily mix with the fluids and soon leaves them, and hence the state of insensibility is of very short duration, and to keep up the state of anæsthesia while an operation requiring time is being performed it is necessary to continuously keep up the inhalation, and that is often very inconvenient if not dangerous to the patient.

It will not produce insensibility unless the vapor is quite concentrated. Chloroform vapor does not require to be mixed stronger than from three to six parts of its vapor to the hundred parts of air, while with amylene more than fifteen parts of its vapor must be mixed with an hundred parts of air to insure complete suppression of consciousness of pain. As the vapor must be quite concentrated, it is with difficulty administered, except by the use of an inhaler.

Dr. Snow, who introduced this anæsthetic into use, has summed up its comparative merits and demerits as follows: "In regard to its odor, it is more objectionable than chloroform, but much less so than sulphuric ether. In respect to its pungency, it has great advantages over both ether and chloroform, being much less pungent than either of them."

In regard to the matter of *odor* the opinions of persons widely differ, and while Dr. Snow does not find the odor of amylene strongly objectionable, Velpeau says: "I find fault with it for its *detestable smell*, as inconvenient for the assistants as for the patients; the little certainty and constancy of its action; the too short continuance of its effects; and the necessity of using a special inhaler for it."

Amylene produces insensibility to pain without causing the profound coma caused by chloroform, or the relaxation of the muscles, although the muscles are made to relax if the anæsthesia be kept up for a considerable time. It does not irritate the fauces or bronchiæ, or cause nausea or vomiting, or the sense of discomfort occasionally felt after inhaling chloroform or ether, but that its use is not without danger as had been supposed, is proved by the fact that several cases of death caused by it are already on record.

In America, amylene has not been used to any extent, and the reports of the results attained in Europe, lead to the opinion that it can never supercede chloroform in general use.

In Vienna Dr. Schauenstein made some experiment examining the preparations manufactured both at Paris and Vienna, and which had been used by the Surgeons to produce anæsthesia; and he reported them all *impure*; all showing the presence of *chlorine*. He concluded therefore, that the amylene of commerce was purposly sophisticated with *chloroform*, and it is owing to the presence of that inebriant that amyline has its anæsthetic powers.

Investigations elsewhere had also confirmed the opinion that Dr. Snow and other medical men have never made a trial of any pure amylene, and in fact that *pure amylene* cannot be made by the distillation of amyl-alcohol with the chloride of zinc. If this be true, and that no pure amylene has been used in these experiments, there is no need of presenting more than the facts of the case, to lead American physicians to wait further investigations ere they use the uncertain mixture.

In presenting the history of the introduction and use of this preparation, I have chosen to give the results of investigations in Europe, for it has attracted too little attention in this country to furnish data for any reliable conclusions.

DYSENTERY.

BY J. B. CHACE, M. D.

Dysentery consists in an inflammation of the rectum, colon, and sometimes in protracted cases it extends to the whole alimentary canal. It is attended with fever, and frequent bloody or mucous stools, griping and severe tenesmus. Chills succeeded by fever are generally its first symptoms. The fever is commonly of the remittent or billious type, sometimes distinctly intermittent. This disease sometimes commences with diarrhœa, but most commonly the bowels are constipated, and a congested state of the liver attends; the fever often runs high, the tongue is coated white, or more commonly yellowish brown. As the disease progresses, the inflammation extends along the whole course of the bowels, until the entire length of the intestines become involved; this is accompanied with pain and tenderness on pressure, and a throbbing sensation is felt in the abdomen. The skin is dry and husky, perspiration being checked; and the liver is almost invariably torpid.

The success in the treatment of dysentery is attributable to the agents used being mild and efficient, thereby removing the disease without irritation or poisoning the system. Most of the cases occurring in this country being accompanied with marked derangement of the biliary function, hepatic alteratives are found to be necessary, for which purpose I depend upon the action of Podophyllin and Leptandrin, to remove the obstruction.

In the treatment of this disease, the objects to be aimed at are, to remove the fever, restore the secretions of the liver and skin, allay the pain and tenesmus, and correct the abnormal action of the intestines.

The first and most important measure is a cathartic; almost every case requires the action of a thorough cathartic, and in many cases this is about all that is necessary. Much depends upon the choice of the medicine used in this disease. In cases attended with derangement of the liver, which is almost uniformily the case in sections of the country where bilious and intermittent fevers prevail, and where the tongue is coated with a yellow or brown fur, a mixture of Podophyllin and Leptandrin is undoubtedly the best cathartic known to the profession.

The discovery and use of Podophyllin and Leptandrin have done much to disarm dysentery of its terrors.

I generally begin the treatment by giving a powder composed as follows:

℞. Podophyllin, grs. iii.
Leptandrin, " vi.
White Sugar, " xx.

Mix and divide into six powders; give one powder every three hours until they operate as physic. This cathartic operates powerfully on the liver, causing a free flow of bile, and its action on the skin is very favorable, opening the pores and restoring the functions of that important tissue. This medicine frequently causes nausea, and occasionally vomiting and a general relaxation of the system, but is always followed by an abatement of the dysenteric symptoms.

If there is severe pain in the bowels, a large sinapism should be applied to the abdomen.

Should the dysenteric discharges continue after the cathartic has done operating, I give the following powder:

℞. Myrrh, grs. x.
Ipecac., " v.
Hydrastine, " iii.
Catechu, " x.
Opium, " iii.

Mix and make into eight powders, and give one every three hours. A small starch injection, with the addition of a little laudanum may be given after every evacuation, and will have a tendency to allay the tenesmus, which is very harassing to the patient.

In cases attended with periodic fever, I give:

℞. Sul. Quinia,
Prussiate of Iron, āā grs. xv.

Mix and divide into six powders. Give one powder every two hours during the intermission. In addition to other treatment, the whole surface of the body should be bathed once and twice a day with an alkaline wash. In mild cases of this disease not attended with much derangement of the liver, and where the tongue is coated white, showing an acid condition of the stomach, the Compound Syrup of Rhubarb and Potassa, answers as a cathartic.

I consider Hydrastis a valuable ingredient in the cordial, but I much prefer a syrup to the sweetened tincture of the American Eclectic Dispensatory. The tincture is too stimulating in many cases, and does not always answer well, especially for children.

As an astringent, where one is necessary, I frequently make use of a syrup made of the following articles:

℞. Witch Hazle bark,
Raspberry Leaves,

Cranesbill Root,
Dogwood Bark,
Fennel Seed,
Cinnamon Bark, āā ℥j.

Mix and steep, and make into a pint of syrup. Dose, one fluidrachm, once in two to four hours, according to the urgency of the symptoms. If there is much pain, add one-fourth part Comp. Tincture of Serpentaria to the above syrup. The dose is the same as the above.

In the convalescent stage, an infusion of Hydrastis, Dogwood root, and Wild Cherry bark, makes an excellent tonic.

Note.—We give place to the paper of Dr. Chace, as he speaks highly of his success in this disease with the treatment described; but we feel constrained to say that the use of Podophyllin and Leptandrin as detailed by him has greatly aggravated the cases *here* on which it has been tried, and should be adopted with extreme caution any where. The disease requires cautious, anti-heroic medication.—Eds.

SCIATICA.

BY J. E. SPENCER, M. D.

I was recently called to treat a case of Sciatica, and as my treatment was rather new, (or at least so to me,) I give it.

My first visit was on the 7th of October. It was observable upon examination that the principal difficulty was about midway up the thigh, where the nerve divides into the popliteal and peroneal branches. The sufferings were intense; the patient could neither sit, walk, or stand, without the most excruciating pain. I commenced treating it in the usual manner, with tonics, nervines, liniments, etc.; which I continued for about five weeks, with but little amendment. At length I decided upon what I considered a more rational treatment, which I give as follows:

I took a piece of sheet zinc, and one of copper, each about one inch wide and three and a half long, and rolled each closely together; I then placed them in a large mouthed bottle with a glass stopper. In the bottle I placed three fluidounces of water, and one fluidounce of sulphuric acid. I let the mixture remain twenty-four hours.

I then made a mixture of

℞. Oil of Sassafras, f℥j.
Oil of Cedar, fʒj.

Oil of Cajeput,
Oil of Cinnamon, āā f℥j.
Alcohol, Oj. M.

To this mixture I added the acidulated water, and used it freely as a wash night and morning. I also took,

℞. Prussiate of Iron, grs. xxj.
Hydrastine, " xiv.
Cornine, " vij. M.

and divided them into seven papers, one of which I gave every three hours. At night I gave one teaspoonful of the fluid extract of scull-cap with thirty drops of chloroform; I also ordered a bandage wet with cold water to be applied on the limb each night at bed-time.

Under this treatment the improvement was rapid, and the patient entirely recovered.

[Will our readers tell us *what* of the treatment detailed, was useful. —Eds.]

PROF. HORACE GREEN—CORRECTION.

Editors of the "College Journal of Medical Science."

In the February Number of your Journal, in noticing two papers published by the writer in the *American Medical Monthly*, the following statement occurs:

* * * "From the time that a patient of his [Dr. Green's] into whose lungs he injected a strong solution of nitrate of silver under the sanction and observation of the New York Academy of Medicine, and who died in Bellevue Hospital from the effects of the treatment, until the present, there has been, etc,"—a statement which, so far as I am concerned, *is entirely without any foundation in truth!* No injection, of a "solution of nitrate of silver," or any other solution, has ever been made by me into the lungs of a patient in Bellevue Hospital, or any other Hospital in this city.

The patient whose death has been most erroneously attributed to the "effects of the treatment," was, doubtless the one whose case is reported in the *Medical Monthly*, (Vol. IV. No. 1. page 45,) and who was operated upon by Dr. Stone, one of the Members of the Committee (appointed by the Academy of Medicine to ascertain whether the elastic tube can be introduced into the trachea,) assisted by Dr. Taylor, one of the physicians of Bellevue Hospital. The following is the account of the operation, as reported by Dr. Stone, Secretary of the Committee.

"*Isaac Griffin*—very deaf man. Dr. Taylor mentioned that this man was affected with secondary syphilis and tubercles, and that he had succeeded in passing the curved tube into the trachea. * * On first trial with curved tube Dr. Taylor entered the Œsophagus. Dr. Stone felt for the epiglottis with the left index finger, and passed the curved tube into the trachea. There was no spasm, and the patient breathed freely through the tube. The success of the experiment was admitted by all. A solution of the nitrate of silver was then thrown in without any spasm. It is proper to mention, that this patient was in a very feeble condition, when this experiment was tried."

The patient in fact was in the very last stage of consumption, and died in about twenty-six hours after the operation; but no member of the New York Medical profession, cognizant of the facts in the case, would risk his reputation on the assertion that the injection of a solution of nitrate of silver had any thing whatever to do with his death.

Of the large number of patients who have been treated by "injections of a solution of nitrate of silver into the lungs,"—and they now amount to nearly three hundred in all—in no single instance have I seen any injurious results therefrom. On the contrary, a large proportion of these cases have not only been greatly benefited by this treatment, but many of them have been, *thereby*, restored to health.

In conclusion, allow me to state, that a most interesting discussion on this subject of bronchial injections has recently taken place in the Paris Academy of Medicine. A Commission was appointed, of which M. Trousseau was chairman and who made, says the Editor of the *Gazette des Hopitaux*, a very favorable report upon it, at the Academy of Medicine, declaring that "catheterism of the Air passages," in the treatment of disease, is not only *practicable*, but of *great utility*. Prof. Trousseau has himself succeeded in injecting the air passage in a case of diphtherites, in Hotel Dieu, in which this measure was attended with complete success and the operation is declared to be, by the French Journals, a "Therapeutic Conquest of great importance."

In the November number of the *Edinburgh Medical Journal*, Prof. J. H. Bennett reports several cases which have been treated by him by injections into the lungs. He says: "I have confirmed the statements made by Dr. Horace Green. I have introduced the catheter publicly in the Clinical Wards of the Royal Infirmary, in seven patients. * * * In a case of bronchitis with Asthma—A female aged 24—I have now injected the lungs eleven times, at first throwing in ʒij of a solution of nitrate of silver of the strength of ʒss, of the crystalized salt to ℥i, of distilled water, and latterly I have thrown in ℥ss, of a solution of the strength of ℈ij, to ℥i. She declares that no remedy has had such powerful effect in lessening the cough, diminishing the expectoration, or delaying the asthmatic paroxysms. She breathes and blows through the tube when inserted four inches below the larynx, and I have been surprised at the circumstances of the injections not being followed by the slightest irritation whatever, but rather by a pleasant feeling of warmth in the chest, (some have experienced a sensation of coolness,) followed by ease to the cough, and a check for a time to all expectoration. I think it of importance," he continues, " that these facts should be shown to the profession as a homage justly due to the talents of a distingushed transatlantic physician, and with the view of recommending a practice which if judiciously employed, may form a new era in the treatment of pulmonary diseases."

The medical profession of France, as well as Prof. Bennet of Edinburgh, have had the magnanimity to accord to an American, the honor of having been the first to achieve this "Therapeutical Conquest," while some of his own countrymen have been unsparing in their condemnation of a method of treatment, for the credit of which, many of the French Journals, at first, put in a strong claim for one of their own Countrymen. HORACE GREEN.

New York Feb. 15, 1858.

REMAKS.—We gladly publish the foregoing letter from Prof. Green, for whose Professional attainments we ever have entertained a very high respect, and to whom we would not even unintentionally be unjust. But to give our readers to understand the foundation for the statement in the COLLEGE JOURNAL for February, and which Prof. Green pronounces "entirely without any foundation in truth," and to correct what we think are errors in Prof. Green's letter, we make the following quotations from the Report of the Committee appointed by the New York Academy of Medicine.

That a patient died from the "effects of the treatment" adopted, may not be true, yet as the Report naturally leads to that conclusion in *our own minds*, but may not in the minds of others, we prefer our readers to judge how far our conclusions are consistent with the facts.

That the patient was under the care of Prof. Green, may be inferred from the fact that the Committee, Drs. Willard Parker, John O. Stone and Isaac Wood, say : " In submitting the above report, the Committee, beg leave to tender their thanks to *Professor Green*, and to Isaac E. Taylor, *Visiting Physicians of Bellevue Hospital, who kindly aided in procuring subjects, and in making the experiments* which are appended, and which form the basis of this report."

In another part of the Report, the Committee say:

"In three patients, injections of nitrate of silver were thrown into the air passages; two were under Prof. Green's care, and one was an inmate of Bellevue Hospital. The first two did not again come under the observations of your committee, and they cannot speak of the results. The correspondence, giving a history of the last case, which terminated fatally, is as follows:"

New York, April 5th, 1855.

Wm. Frothingham, M. D.:

Dear Sir.—I will thank you to send me an account of the condition of Isaac Griffin, previous to the 27th of January, when the nitrate of silver was injected into the lungs, and his appearance afterwards, up to the time of his death. Please give me an accurate account of the *post-mortem* appearances, and anything else of interest touching the experiment in his case. I remain your friend,

Bellevue Hospital, April 15th, 1855. Willard Parker.

"*Dear Sir.*:—In answer to yours of the 5th inst., requesting an account of the case of James Griffin, I send a copy of the notes which I have by me.

"James Griffin, aged 55, stone mason by trade, a native of Ireland, admitted January 17th, 1855. Had symptoms of phthisis for about eight months prior to admission. On physicial examination, signs of tubercles in both lungs, and of a small cavity at apex of right lung, discovered. Some suspicion of syphilis, but nothing certain made out. Has chronic inflammation of fauces, and a small ulcer upon one tonsil. Is somewhat deaf. Has neither night sweats nor diarrhœa. Pulse in the afternoon about ninety, but less frequent in the morning. Appetite tolerable. General condition rather weak, but is not confined to bed. Takes his meals at the common table, and living in the second story, goes down to the yard to attend to the calls of nature. Has some dyspnœa after ascending stairs. This was his condition up to the afternoon of January 27th, no material change having occurred since his entrance.

"On the afternoon referred to, between one and two drachms of a solution of arg. nitrate, of the strength of two scruples to the ounce, were injected into his trachea. I saw him within ten minutes of the operation. He was then endeavoring to find his way down stairs to his ward; his mind seemed much confused, and he could speak with difficulty. Being conducted to the ward, he was shortly seen by Dr. Stone, yourself and me. He was then laboring for breath, his lips and hands livid, extremities cold, pulse, 120 to 130, and thready. An involuntary evacuation of his bowels had occured.

"By the application of external heat, mustard to the epigastrium, and brandy and carb. ammonia internally, reaction was established in a couple of hours.

"The next morning he was too feeble to sit up, and had to be propped in bed, that being the easiest position for him. There was great dyspnœa, with a rapid weak pulse, and lividity of surface.

"But little could be learned by auscultation, loud bronchial rales disguising other sounds, if others existed. Death took place Jan. 28th, about 4 P. M., within twenty-six hours of the operation.

"Autopsy seventeen hours after death. Abdominal viscera healthy, except liver, which was a little fatty. Heart and great vessels healthy. Fauces inflamed. Larynx and upper part of trachea healthy. About three inches down trachea an intense and minute injection of the vessels of the mucous membrane commenced, and continued down into the minute bronchi.

"Nearly all those parts exhibiting the inflammatory blush were obscured by an opaline appearance, similiar to that observed on mucous membranes which have been washed with nitrate of silver. This faded away after an hour of exposure to the air, leaving the intense redness still more distinct. * * * * * * * *

[Signed.] William Frothingham."

If the report of this Committee is inaccurate, or unjust to Prof. Green in any particular, we will take great pleasure in publishing any statement Prof. Green or his friends may favor us with.

The action of the Academy, its Committee, and Prof. Green, in this affair, have been animadverted upon, and until the present communication, no positive and absolute denial of the truthfulness of the Committee's Report has come under our notice.—[Ed's. Col. Jour.]

CASE FOR DIAGNOSIS.

Mrs. G. came under my care on the 6th of April 1857. She had stomach sickness, pain in the back, and symptoms of pregnancy, but her menstrual flow was regular, and has appeared once in four weeks.

In three months after I saw her, the abdomen commenced to enlarge, and has increased in size ever since, until now she appears like a woman in the sixth month of pregnancy. The mammæ are quite large and have contained milk for four months past. The nipples are prominent, and the areolæ are well marked.

I have examined the patient. No fœtus can be felt through the walls of the abdomen; neither can any tumor be discovered in the hypogastrium. The patient thinks she can feel something hard in her abdomen when she lies upon her side. The os uteri feels soft as though it might be œdematous. No pulsation of the fœtal heart can be heard. No motions in the uterus are present, or have been the past five months.

Since June her health has been good, her appetite demands quite substantial food, she gains in flesh and enjoys life.

THE INFLUENCE OF BELLADONNA IN SCARLET FEVER.

BY H. ALVORD, M. D.

The question you ask in your letter has caused me to conclude to write a few words respecting the curative, or I might say, the supposed curative effects of Belladonna in Scarlatina. I find the belief to be common among our practitioners, that Belladonna is not only a certain cure for scarlet fever, but a prophylactic of decided merit. I have been a participant in this belief for several years, and yet a seemingly light cause has shaken my faith. Not that it presented anything new, but the constantly occurring facts—or want of facts—were made more plain, or perhaps, "my eyes were opened" to see what I had not before noticed, of that which were passing continually within my view.

I have given Belladonna in several cases during the current season and nearly all of these cases recovered in from three to five days, and were in most of them well at the ordinary fifth or sixth day's crisis spoken of in the books. Yet there was cases in which this agent was used without any perceptible effect. They would run the five or six days and then recover, or die in two to four days.

In the case referred to, as causing me to doubt, I was called to see an apprentice in a printing office, and on examination found the sore throat, scarlet-rash on the breast, etc., and papillæ on the tongue, all plainly marked and distinctly present. I prescribed:

℞. Ext. Belladonna, grs. iv.
Water, f℥ss. M.

Of this ten drops were taken each hour with ordinary directions respecting diet etc., and in two or three days my patient was at work. Another case with the same symptoms, examined at the same time by me, took nothing but rhubarb and pennyroyal tea. I could see no difference in the result, and yet, had not the contrast been presented so plainly to my perceptive faculties, I fear my reflective powers would have continued on the dull routine of belief. "I have given Balladonna in a great number of cases of scarlet fever which got well very soon; ergo Balladonna will cure Scarlatina." Now I do not know whether this agent is, or is not, really of any benefit in this disease.

The same negative class of evidence is presented claiming our credence respecting the prophylactic powers of belladonna. The evidence I have noticed goes far to prove that those who are the most apt to believe undoubtingly in its effects—curative and prophylactic in Scarlatina—are of that cast of mind on which the last argument used is likely to produce the prominent impression. Where interest and prejudice do not have their disingenuous effects, with this class the *fact* is first acceded to, and then it is easy to say "those cases were *not* scarlet fever wherein the pretended prophylactic had been used and failed, and those *were* Scarlatina in which belladonna was given, and the quick recovery was owing to its use."

Suppose a small cloud for the moment obscure the sun when I desire the brightest sunlight. I throw a stone at that cloud saying I will drive it away. The sun shines immediately, and I repeat this for several days at every opportunity, the effect is the same apparently, not always so soon as I would wish, yet every time, after I throw the stone, I am relieved from the obscurity of the sun; am I to believe that my action has any effect on the cloud, or the sun?

Let those who are so ready to rely on the belladonna to cure or prevent scarlet fever, look at the evidences which are deemed conclusive by so many, and then go and read the histories of Pagan nations, then commence with "Abercrombie's Intellectual Powers," afterwards read other kindred works, the tenor of which is to direct our reasoning powers to discover the relation between cause and effect.

Remarks.—The source of error in the conclusions drawn from the use of belladonna as a prophylactic in scarlet fever, which are pointed out by Dr. Alvord, will probably account for the difference which has obtained in the opinions of different members of the profession.

We should remember that *one negative fact* must far outweigh many *apparent* positive ones. Hence Pereira properly says: "I conceive twenty cases of failure are more conclusive against the opinion here referred to than one thousand of non-occurrence are in favor of it. Now Lehmann, Barth, Wednt, Murhbeck, and others that I could refer to, declare it has failed in their hands to evince its prophylactic power. A remarkable failure is mentioned by Dr. Sigmond, of a family of eleven persons who took the supposed specific, *yet* every individual contracted the disease."

The Report of the Committee on Epidemics to the American Medical Association made at the meeting held in this city, in 1850, was strongly *in favor* of the protective power of belladonna in this disease, and that report led many to try its vaunted power. But neither those nor the many to whom I have distributed the extract for trial have reported favorably in regard to its supposed prophylactic influence, while many of those who formerly had no doubt, on more careful trial have been obliged, however unwillingly, to yield up their faith in its efficacy. C.

UTERINE DERANGMENT.

BY J. P. VAN. VOORHIES, M. D.

Mrs. B——, aged 30 is of a sauguine nervous temperament. Her health was tolerably good (with the exception of constipation,) until about a year ago, which was shortly after her marriage. About that time her health began to decline, apparently without a cause, as she expressed it. She had no pain except after eating a hearty meal, her food distressed her some, rather inclined to dyspepsia, appetite remains good but she dare not gratify it. She had been treated by an old school physician until the first of last July, at which time I was called to take charge of her. She had been failing for the last four months very fast. He was giving her some tonic bitters; had been unable to get an action from the bowels without the aid of enemas for the last two months. Her bowels seemed to be settled down in the lower part of the abdomen and were very tender to the touch. She was troubled with leucorrhœa also.

When I first saw her she was unable to walk about the house. She had little pain except in the back, and soreness of the bowels. She had a cancerous growth on the hand, which I destroyed and healed with great difficulty. Her circulation was very sluggish. Her pulse was about 80 per minute, and so weak as hardly to be detected at the wrist. In short everything was ailing her that could arise from an inactive circulation.

The indications to be fulfilled in this case, to my mind, are very plain

I consider it a case of general debility arising from an inactive or diseased condition of the liver, with too frequent indulgence of the nuptial rights. Be that as it may, I commenced giving her small doses of Podophyllin, Leptandrine and Xanthoxylin, and after a week increased them until they caused an operation from the bowels daily. At the same time I ordered the alkaline bath to be used daily, and dry friction to be applied over the bowels several times a day by means of the hand, flannel-cloths, with exercise, etc. Shortly after, I commenced using Macrotryn and Hydrastine, alternated with the muriated tincture of Iron, and continuing the hepatic powders.

About a month ago I commenced using the extract of Butternut, and I think she has improved more rapidly since. With the butternut I have used the Gossypium and Macrotryn and preparation of Iron. She has been improving slowly, and is now able to walk about the house and yard. She has no pain in the back, her bowels not tender, and are nearly regular, but I am obliged to use laxatives. She is some troubled with Leucorrhœa yet. Her circulation is very inactive. Last week I gave her powders composed of Hydrastis, Quinia and Prussiate of Iron. I find it tedious to treat such cases.

EXAMINATION OF CONCENTRATED PREPARATIONS.

BY P. DUSSAUCE.

Having undertaken a chemical examination of the new series of bodies called *Resinoids* I procured some of them at the Laboratory of B. Keith & Co. of New York. Those that I purchased were *Hydrastine*, *Senecine*, *Stillingin*, *Asclepin*, *Podophyllin*, *Macrotin* and *Veratrin.* My object was to separate the different principles, study them chemically, ascertain which were the active agents, and decide in which family they could be classed; in a word, assign them the place that they ought to occupy in treatises.

In prosecuting my experiments the results were very different from what I should have expected in treating organic matters. Then I would assure myself that the bodies on which I operated were *pure.* I analyzed them and was disagreeably surprised, after a careful examination, to find that I had labored under an error, and that these *pretended concentrated preparations* were only a mixture of different impurities. In consequence of these discoveries, I thought it useful to the profession to give the results of my analysis.

Hydrastine.—This substance has a saline taste. Treated by alcohol we have a yellow liquid, from which the Hydrastine is precipitated. The residuum insoluble in alcohol when treated by hot water produces a solution in which nitrate of silver indicates the presence of Chloride of Sodium. The part insoluble in alcohol and water carefully examined, has all the appearance of the root in powder.

The results I obtained are as follows:—20 grains Hydrastine gives:

Impure Hydrastine,	10	grains.
Salt,	5	“
Root,	5	“
	20	“

Which for an ounce are:

Impure Hydrastine,	240	grains.
Salt,	120	“
Root,	120	“
	480	“

By this analysis it will be seen that such Hydrastine probably has been manufactured from an Alcoholic Extract of Golden Seal to which salt has been added, and root in powder to disguise the taste of salt.

Senecine.—Alcohol dissolves one-half of this, which is nearly all chlorophyle, and a very little *senecine.* The insoluble part incinerated left a residuum of Magnesia. 20 grains senecine gives:

Chlorophyle and Senecine, (traces,)	10	grains.
Magnesia,	5	“
Senecine,	5	“
	20	“

In an ounce we have:

Chlorophyle and Senecine,	240	grains.
Magnesia,	120	“
Senecine combined with Magnesia,	120	“
	480	“

The Senecine appears to have been prepared in the same way that the lakes are for painters, by precipitating the Alcoholic Extract by Magnesia, washing the precipitation and drying it.

Stillingin.—This substance gives about the same result as the Senecine, except that alcohol dissolves but a very small part. 20 grains Stillingin gives:

Magnesin, - - - - - -	7.34 grains.
Stillingia, - - - - -	12.66 "
	20. "

For an ounce:

Magnesia, - - - - - -	176 grains.
Stillingin, - - - - - -	304 "
	480 "

The manner of preparation seems to be the same as the Senecine.

Asclepin.—Treated by alcohol, one part is soluble. From the soluble part Asclepin is precipitated. The insoluble part is the root in powder. 20 grains Asclepin gives:

Soluble part in Alcohol, - - -	13.33 grains.
Insoluble " " (root,) - -	6.67 "
	20. "

For an ounce:

Soluble part in Alcohol, - - - -	320 grains.
Insoluble " " (root,) - -	160 "
	480 "

The Asclepin appears to me to be only a dry Alcoholic Extract mixed with root in fine powder.

Podophyllin and Macrotin.—These two substances give the same result as the Asclepin, one part soluble in alcohol, and one part insoluble. We have for one ounce:

	Podophyllin.	*Macrotin.*
Soluble part in Alcohol,	320 grains.	280 grains.
Insoluble " "	160 "	200 "
	480	480

Like Asclepin, these preparations without any doubt are made with the alcoholic Extract mixed with some root.

I have not carried my operations as far as I intended, for I think the others are like those I have examined.

I have been obliged to suspend my experiments to a certain extent, as it was impossible to obtain any satisfactery results from such impurities. My only remedy is to prepare them myself *pure*, which I am doing, and expect to obtain different results which I propose to publish at a later day. I shall be happy if these analyses are of any advantage to the profession, and shall save time and disappointment to any chemist who, like me, may undertake an examination of these bodies, and commence with them supposing them to be *pure*.

NATURE AND CAUSES OF ASIATIC CHOLERA

BY PROF. MICHAEL VON VISANIK.

Translated from the German, by T. C. MILLER, M. D.

[In the COLLEGE JOURNAL for 1857 several papers in regard to the Causes and Nature of Cholera, from the pen of the talented Prof. Von Visanik of Vienna, were published. In the present and future articles we propose to consider the *Treatment* adopted in Vienna and elsewhere, in this fell disease and others which precede and accompany it.

These papers must be of peculiar interest to the profession at the present time, when Asiatic Cholera is once more extending from Asia into Europe, and will probably reach our own country by midsummer or autumn.

It has been customary for Medical periodicals to fill their pages with articles on Cholera, *after* the subsidence of an epidemic, but we prefer to present information in advance, so that our readers already in possession of all the information the experience of the profession has accumulated, may be prepared to meet the approach of the disease. Again we would bespeak a careful consideration of the writings of Prof. Von Visanik, who from his excellent scholarship, and his vast experience in this disease, is every way entitled to have his opinions read and carefully considered.]

CONTAGION.—In regard to the contagiousness, or the non-contagiousness of Cholera, there is among the profession the greatest diversity of opinion. Each party, the contagionists, as well as those who consider the disease of a miasmatic origin, search for positive evidence to support their conclusions. But the facts will sustain but one view of the matter.

Whether we are to consider cholera contagious or otherwise will depend much upon the meaning we attach to the term. Many use the word in a vague manner, if with any conception of its true meaning.

Contagion, as applied to disease, means, that cause of disease which is again reproduced in the system and possesses the power of evolving itself out of the elements of the healthy tissues, so that being placed in contact with those in health, they have a disease like that with which they are brought in contact.

The *fomites*, as the contagious effluvia have been called, are in the solid, fluid, or gaseous excretions of the sick, and may contaminate the clothing or even the atmosphere which is brought in contact with the sick, and may thus be conveyed to those who come in contact with the clothing or the atmosphere which is thus contaminated.

Those who favor the idea of the contagiousness of cholera assert, that cholera *does* in the course of its existence, unfold such a contagion as has been referred to, and then endeavor to account for the spread of the epidemic by attributing that spread by supposing the poison of contagion to be transported on the person or the clothing of those exposed to its presence. They maintain that it spreads from patient to patient in the wards of the hospitals, and from person to person in houses and streets, and that not seldom it is carried from city to city by the passage from place to place of armies, or bodies of soldiers, and even by ordinary travellers, and across seas and oceans in ships. Its steady progression along the great routes of travel, is also cited. These are the most important facts and arguments adduced by the advocates of the idea of its contagiousness.

Personally from the year 1831 when a very severe and extensive epidemic of Asiatic cholera appeared in Vienna, and when I had ample opportunity to study the disease both in private and in hospital practice, up to the present time I have known that the number of nurses who were attacked by the disease, was extremely small. In the year 1854 there was entrusted to my care the second cholera division of the General Hospital, and not one such case occured. Not only were the nurses exempted from the disease, but my assistant physicians also entirely escaped, notwithstanding we were constantly with the sick, and gave them medicines with our own hands.

During the prevalence of cholera frequently the persons residing in one dwelling, or on one street, were attacked one after another, which only proves that in such houses, or on such streets the cholera-miasm had met with circumstances favoring the developement of this disease. The fact that a person affected with another disease, when brought into a ward with cholera patients is attacked, does not prove the contagiousness of the disease any more than similar phenomena would prove the contagiousness of ague. They had already the cholera-miasm in their system, and the disease was developed under favoring circumstances.

The assertion that the progress of the epidemic is slow, is not always true. In 1831, the epidemic spread with great rapidity, much more rapidly than any contagious disease was ever known to spread. One evening about 11 o'clock many persons in the city and out of the city were taken sick, and those too, between whom there had been no sort of intercourse.

The whole history of this disease, to me is conclusive evidence of its non-contagious character. From Jessora, its birth-place, it spread, passing over houses, streets, cities, rivers, and mountains with the greatest rapidity until it reached Calcutta. No one can ascribe the speed of the disease to the passage of bodies of men. In those years the epidemic raged in places not frequented by soldiers or travellers.

Experience has proved that cholera has been confined to some cities and localities, never appearing in others, although the most constant intercourse has been kept up between them. Even the most strenuous advocates of its contagiousness have often admitted that such facts existed in the history of the late epidemic.

In the year 1831 cholera appeared in the Foundling Hospital in Vienna, and I was the first physician called at the outbreak, and I endeavored to use that opportunity to decide this question. There were many nursing children attacked with the cholera, while the nurses by whom they were fed were entirely exempt from any attack. So also, it was observed that nurses were attacked while the babes to whom they gave suck remained well. Even I have reason to suppose that unborn infants have been attacked with the disease and the mother escaped.

Even since the appearance of the cholera in 1831, it has been observed by many physicians, that certain streets, and dwellings, and even certain rooms, are subject to visitations of the epidemic at each return. Why we may ask, if cholera be contagious, are these streets, dwellings, and rooms, at times free from the epidemic, while at other times sickness will prevail? As they are free from cholera until an outbreak of an epidemic, it is only on the appearance of a cholera-miasm that the disease can exist. In the year 1855, the evidences of the presence of a miasm, and the absence of all appearance of contagiousness of the disease caused many of the former believers in the contagiousness of this disease to waver in their opinions, and even to yield them entirely. Quarantine regulations, then, can never have any influence in preventing the spread of an epidemic of Asiatic cholera. We should place no dependance on quarantine regulations, but rather upon that extreme cleanliness of cities, dwellings, and their surroundings, which will prevent the possibility of the foundation of that miasm which is the source of cholera.

The examination of the contagiousness or non-contagiousness of cholera would be of little value if it simply demonstrated the inutility of Quarantine regulations to hinder the spread of this disease; but the value of sanative local measures to take the place of quarantine regulations can also be established at the same time, and hence the propriety of examining this question in all its bearings.

Does the cholera-miasm cease to exist immediately on the subsidence of an epidemic?

I have already said that I was a member of the Sanative Commission in 1831, and having control of the post mortem examinations in a quarter of the inner city, and afterwards as Physician to the Foundling and Orphan Asylum, I consequently had a most admirable opportunity to observe the workings of the epidemic. In later times during the prevvalence of cholera in Vienna, I have even devoted myself to stay these great public calamities. In the year 1854 I had the control of the second cholera division of the General Hospital, and during all this time, in the outer city there have been cases of sporadic-cholera.

The belief that cholera would entirely disappear on the abatement of the epidemic, was very strong and nearly universal with us in 1831, so that in that year, the report of two new cases as occurring in the Dreilaufer house three weeks after the disappearance of the epidemic caused such excitement that I was appointed to examine into the facts and report accordingly. After a careful investigation, I found the report true. The two cases were those of Asiatic Cholera, one of which recovered, and the other died at the end of forty-eight hours. The *cause* of the attack was error in diet. These and similar facts prove conclusively that the effects of cholera-miasm do not immediately disappear on the subsidence of an epidemic, but lessen and disappear gradually. Hence sanative measures should be advised and adopted, not only before and during the prevalance of cholera, but for a considerable time after its disappearance.

CARCINOMA, OR INDURATION OF THE PANCREAS.

BY LEWIS E. MILLER, M. D.

This disease is often named from its most conspicuous symptoms, which are usually complicated. It is extremely difficult to distinguish the difference between the various abnormal charges to which the pancreas is subject, and in this paper I shall confine myself to the description of the *induration* of this organ as compared with other derangements to which it may be liable.

This is usually the result of inflammation, and is not unfrequently accompanied by a lingering process of that disease, although as has been stated by Hohnbaum it may be developed independent of and entirely unconnected with any preceeding or synchronous inflammation.

Rahn gives the following review of the course of this disease. The patient suffers for months and perhaps for years by molestation in the abdomen, which is constant and cannot even be removed by laxatives, digestives or stomachic remedies, or if relieved for a time, the pains always return with increased force, and often give rise to the suspicion of extensive disease of some portion of the intestines. These abdominal disturbances gradually increase, the appetite diminishes, a degree of nauseousness obtains, with a dull pain and burning in the region of the stomach, a peculiar oppression of the chest and difficulty of breathing, tympanitic condition of the abdomen, costiveness and debility which continue from week to week. With the increasing exhaustion and emaciation the appetite disappears entirely, and there is an excessive discharge of saliva, which gives rise to a peculiar acidity in the throat. Vomiting appears, becomes more frequent, and finally ensues without any effort, which for the moment seems to give relief by the discharge of undigested food and a quantity of acrid substances.

Should the inflammation terminate in *softening*, the surrounding organs become more or less implicated by the extention of the inflammation, the region of the stomach becomes extremely sensible, the pain is increased until spasms and swooning are produced. The stomach will not bear the mildest substance, and by the frequent vomitings is thrown off a disagreeable dark fluid, and often there is seen a discharge of blood, accompanied with bloody stools, and the highest degree of hectic fever. This course however is found to vary considerably from the greater or less intensity of the disease.

When the pancreas is indurated and enlarged, it may very easily be felt as a hard and somewhat movable tumor being about half way between the umbilicus and the extremity of the ensiform cartilage. To examine it closely the stomach and bowels must be empty, and the patient must rest himself upon his hands and knees. The tumor presents frequently a pulsation synchronous with that of the pulse which is dependent upon the passage of the blood through the aorta which lies immediately beneath it. The pancreas becomes occasionally so much enlarged as to materially interfere with the passage of the blood through the aorta, and hence follow palpitations of the heart, and congestions of the head and upper extremities.

The pain in the region of the stomach is increased by partaking of food, and when the patient assumes the erect posture it is followed by a feeling of weight and oppression in the epigastrium. At other times the patient complains of pain in the back in the region of the kidneys. The continued discharge from the mouth is only partially derived from the salivary glands, but appears to ascend through the throat, and is a transparent fluid, often tenacious, and of a saline or acidulous taste. This however is occasionally absent entirely and the mouth is dry, owing to an arrest of the salivary secretions.

In some cases the patient is affected with a chronic vomiting, which occurs two or three hours after eating, by which is discharged indigested food, mucus, sometimes yeast-like or frothy brown fluid, and occasionally bile. In most cases of induration of the pancreas the patient suffers from obstinate constipation, but occasionally there is a tendency to diarrhœa with a discharge of feces mixed with a quantity of oily or fatty matter. The duodenum is particularly liable to become implicated in this disease, and is often the seat of organic destruction.

The disposition is more or less changed, the patient exhibits a considerable anxiety for his own safety and indifferences to surrounding objects, or a tendency to anger and a melancholy which often increases to madness. The skin is generally cold, parchment-like and dry, and as the disease advances, there ensues emaciation, exhaustion of strength œdema of the feet, hectic fever and death.

Disease of the pancreas may be confounded with an affection of the stomach, particularly of its pyloric extremity, but it may be distinguished by the following symptoms. In organic degeneration of the stomach the vomiting is accompanied with excessive pain, and great bodily exertion, immediately or very soon after eating, it seldom occurs spontaneously, and the discharge consists, besides the food, of a fluid resembling coffee grounds; in disease of the pancreas the vomiting does not appear until some two or three hours after eating, and often without any exciting cause and is also characterized by an absence of bodily exertion.

The constipation which accompanies pancreatic affections is usually when the disease assumes a torpid character, extremely obstinate, so that evacuating remedies which are not drastic in their action produce no effect whatever, and it is only by the use of an enema that an operation can be obtained. In diseases of the stomach the constipation although obstinate can be very readily affected by purgatives which for the time afford relief. In disease of the pancreas there is present a livid complexion, sometimes œdema of the eyelids, yet one can not fail to observe notwithstanding the long continuance of the disease, a proportionate good appearance ; but in affections of the stomach the complexion assumes a clay-colored appearance, and the countenance exhibits that peculiar stamp that is so expressive of disease of the deep seated organs that are especially connected with the continuation of life.

The patient is melancholy, sentimental and emaciaton takes place even earlier than in the former, and the patient dies from a deficiency of food.

The pain in affections of the pancreas is situated beneath the stomach and is felt only by strong pressure, the abdominal regions are soft, bloated and painless, while in the other disease the pain is felt in the region of the pylorus upon slight pressure, the abdomen is bloated and everywhere sensitive.

Disease of the pancreas is found to occur much more frequently in the male than in the female. Every age is liable to it. Among the causes of this disease may be enumerated the use of mercury, sedentary habits of life, difficulty of digesting food, excessive use of spiritous liquors, especially whiskey, abuse of purgatives, contusions upon the region of the stomach, severe exertions of vomiting, influence of humid, cold air, depressing emotions of the mind, scrofulous constitution, ovarism, metastasis from the salivary glands, sudden suppression of habitual discharges and cutaneous eruptions, the use of corsets and other tight fitting garments.

It is very seldom that diseases of this kind occur, far more seldom even than was supposed by the ancients. It is said at the present day to occur quite frequently in the practice of some physicians who are not able to make a diagnosis with certainty, and with them all chronic affections and obscure diseases of the stomach, liver and spleen are called an affection of the pancreas. The prognosis is unfavorable, as they almost invariably terminate in *death*.

In the treatment a careful regard must be had to the causes, an observance of such diet and mode of life as is found to agree with the patient. Various remedies have been used and recommended but as the treatment can only be paliative, such substances will be of service as will meet the indications as they present themselves. Externally, volatile liniment will often afford relief. Much benefit may be derived from foot baths made by adding two ounces of aqua regia to ten quarts of warm water. For induration of the pancreas, carbonate of potassa, lime water and milk, gum ammoniac, belladonna, aconite, oxide of zinc with rhubarb, animal charcoal, and various preparations of iron, as the ammonio muriate, carbonate, or iodide of iron, have been variously recommended by different writers and used with some degree of success, but in affections of this character there is nothing equal to Iodine given in form of tincture, it allays the vomiting and appeases the most violent colic pains, much better than any of the opiates.

OLD PHYSIC AGAIN.

BY J. W. ABRAHAM, M. D.

A contributor to a Medical Journal should always attach a sufficiency of dignity to himself and to his profession, to treat with candor and veracity every system of medicine that he may see proper to bring within his range of thought. I lately noticed an article in the June Number of the College Journal, for the year 1856, under the Caption of "Old Physic Examined," in which the writer not only evades the facts in quoting from Professors Elliotson, Wood and Watson, but evidently endeavors to grossly misrepresent their plain teachings.

The disease to which he directs our attention is Apoplexy. He says: "Prof Wood says, that old age is a predisposing cause and probably the most powerful ; that it is no uncommon event for tall and thin persons, with pale faces and small heads to die of apoplexy." He quotes from Dr. Elliotson who says, "I am sure that some persons have had apoplexy from having been bled too frequently, even locally." He also quotes from Dr. Watson and says: "Prof. Watson too says that apoplexy is common in persons who are tall, pale and thin ; also in those who are past the age of fifty." The writer then goes on, and after giving *his* ideas of Apoplexy and its pathological history, he says: "and yet in the face of these facts what is the "Orthodox" treatment of this disease of 'advanced age' and to which "old age is the most powerfully predisposing cause. General and local depletion of blood is the sheet anchor, says Dr Watson."

Now a brief quotation from Dr Watson will shelter alike himself and Drs. Wood and Elliotson from the storm which this modern Esculapeus would bring down upon their devoted heads. Dr. Watson in speaking of the treatment of apoplexy says: "I know of no rule so likely to guide you aright as that laid down generally by Cullen, of obviating the tendency to death. You must examine to which of the several modes of dying their may be any obvious approach. If the tendency be as in apoplexy it mostly is to death by coma, the bloodletting and the evacuation plan will generally be requisite. If on the other hand the tendency be to death by syncope you must withhold the lancet and even have recourse to *stimulating and restorative measures*." (Vide. Practice 3rd Ed Page, 328.)

Does Dr. Watson here recommend the lancet in those old, tall, pale and thin persons? Now let us see in what form of the disease under consideration he does recommend 'bloodletting as the sheet anchor.' In speaking of that form of apoplexy characterized by a high grade of sthenic action, turgescence of the face, etc., he says: "But although in that form of the disease bleeding is our sheet anchor, it may be carried too far, or repeated too often. We must not loose sight of the fact that many of those persons are *old* and will not survive under depletion." So far then from recommending bloodletting as the "sheet anchor" in anæmic cases, he cautions us against the bold employment of the lancet in the *opposite form* in the old. It would be amusing to follow this man further, but we forbear, feeling confident that Allopathy will not die from inanition, if the depletion necessary to bring about this result should be left to our astounding examiner of "Old Physic."

But to change the subject partially, Eclectic physicians generally in treating on bloodletting, and comparing its now unfrequent employment to days gone by, appear to forget that the epidemic constitution is liable to change. They appear to forget the first appearance of our present form of Typhoid disease in this country which broke out among the American troops on the Chesapeake Bay, and called forth a pamphlet from Prof. Chapman, pointing out to the Army Surgeons the change in the epidemic constitution, and recommending them to support and thereby counteract the morbid tendencies. The Army Surgeons as well as the profession generally profiting by this timely call from an old commander wheeled into line, and from that time until the present diseases generally have assumed a typhoid type, as well as a choleroid tendency since the appearance in 1832 of Asiatic Cholera in this country. Hence we learn that to practice the healing art successfully we must have an eye single to the different forms that diseased action may assume.

Let acute diseases again assume (which they are liable to do at any time) that sthenic type which characterized them when men taught the healing art whose revered memories are now by some stigmatized with the appellation of "Old Fogy," and the lancet would again reign triumphant, unstified by the fetid vapors that would rise in solemn silence from the mouldering ruins of Young Physic.

FRACTURES OCCURRING AT THE LOWER EXTREMITY OF THE RADIUS.

BY PROF. A. J. HOWE.

Fractures of the radius occurring at the lower extremity of the bone are quite common, and the appearances of the limb following the injury are not strikingly unlike those presented after a dislocation or sprain. So difficult is it sometimes to make a correct diagnosis in these cases that physicians possessing considerable surgical acumen often fail to understand the true character of the injuries. The ulna may be broken yet the lesion seldom occurs unless from the application of crushing violence. If the fore-arm be caught in moving machines, or be run over by a heavy wheel, both of its bones are likely to sustain fractured injuries. The radius alone is likely to be broken from a more common cause. Every body is liable to a fall, and the hand is thrown out instinctively to break the force of it, or protect the head and trunk from violence. "Under these circumstances" says Dr. Smith of Dublin, "(if luxation of the bones of the fore-arm at the elbow-joint, does not occur) from the influence, upon the one part, of the weight of the body and impulse of the fall, and upon the other, of the resistence given to the hand by the ground, the radius, which receives almost the whole force of the shock, breaks at its weakest part, that is, its lower extremity, for it is here that the cellular structure is most abundant, and the compact tissue thinnest."

The ulna not properly entering into the articulation at the wrist, or with the carpal bones, escapes the shock, and a fracture. The radius, however, lending its expanded extremity for articular purposes receives all the force communicated to the arm through the hand. Its form, too being quadrilateral, is rendered incapable of sustaining without fracture so great a resistence as it would were it cylindrical. There is a variety of reasons, then, why the radius should break at its lower extremity when the hand is thrown out prone and extended during a fall, and receives the entire weight of the body, and the impetus it may have acquired while falling. The fracture occurs anywhere within an inch and a half of its carpal extremity, involving sometimes its articular surface.

Several distinguished surgeons in this country and abroad have written essays upon the nature, appearances, and treatment of fractures occuring at the lower extremity of the radius, and a few of them have gotten their names associated with varieties of the injury. In 1814, Dr.

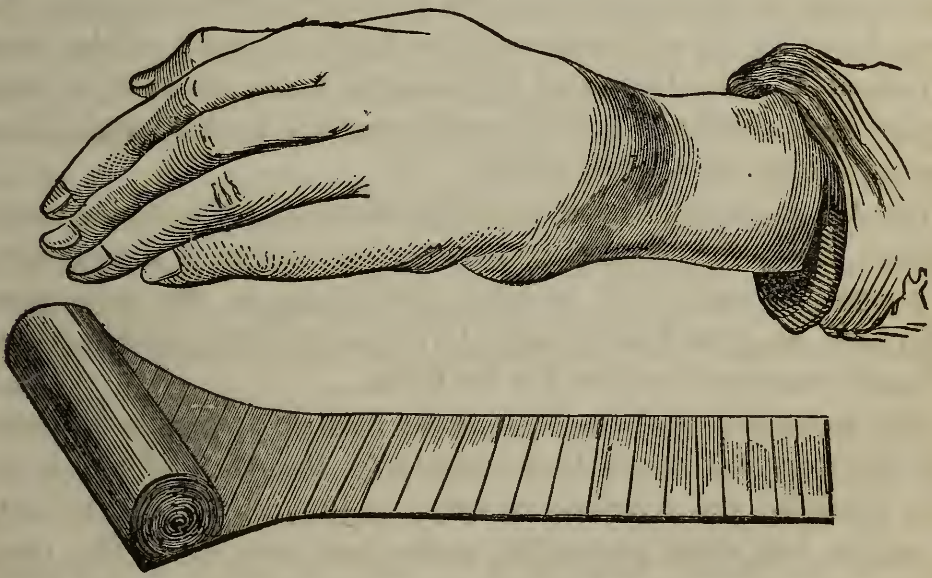
Abraham Colles of Dublin, published an article in the *Edinburgh Medical and Surgical Journal*, upon the peculiarities of a fracture commonly occurring about an inch from the carpal extremity of the radius, and since that time all fractures of the lower portion of the radius except such as involved the articulation, have been called '*Colles' fracture.*' Dr. J. Rhea Barton of Philadelphia, having observed many times fractures of the lower extremity of the radius *extending into the articulation*, wrote an article upon the subject, and published the results of his observations in the *Phila. Med. Examiner* (Vol. 1. 1838). Since that time American Surgeons have commonly called the injury he described '*Barton's fracture*' of the radius. Both of these fractures have certain appearances in common, and either may be taken by the inexperienced for a dislocation, sprain, or severe contusion of the wrist. The deformity following either fracture is marked, yet the nature of the difficulty is obscure. There is an absence of crepitation and the ordinary symptoms of fracture. The swelling that rapidly supervenes prevents one from feeling any irregularities of the broken bone, and the rotatory movement that can be communicated to the entire radius by pronating and supinating the hand, involves the injury in the greatest obscurity, and deceives one seeking the signs that indicate a broken bone. An elevation presents on the wrist which extends to the back of the hand. This dorsal tumor is opposite a deep sulcus or excavation on the flexor side of the extreme lower part of the arm ; and just above the sulcus is a prominence. In connection with these distortions there is an abnormal projection of the lower extremity of the ulna, as if that bone were dislocated, and it can be freely moved in various ways when taken hold of. The abdomnal projection on the part of the ulna is caused by the hand being drawn in the opposite direction through the agency of the supinator longus, and the extensor muscles of the thumb. Lonsdale considers this peculiar prominence of the ulna, and lateral displacment of the hand as diagnostic of a fracture through the lower extremity of the radius. The entire aspect of the fore-arm and hand after a fracture of the radius through its lower portion has the resemblance of a silver fork when the arm and hand are held in the prone position. Hence Velpeau has graphically called it the "fork-like deformity."

The pain attending a recent injury involving a fracture of the lower extremity of the radius is severe, and the gentlest manipulations of the parts excite that piercing pain which has been considered characteristic of fracture. If extension and counter-extension be brought to bear upon the hand and arm the deformity will be for the time considerably diminished but not entirely overcome. From the irregularities of the tumefaction a twisted appearance of the wrist is observed, and this will become permanent if the injury be not well managed during the healing process.

The lower fragement which is often a mere bit of bone, adheres to the carpus and moves with it when enough extension is applied to the hand to remove the small fragment from the larger. Ordinarily the two fragments are held together by muscular contraction, and any rotation of the carpus will be accompanied by a corresponding movement on the part of the radius. If however, the patient be asked to rotate the arm he will apparently do it, but the movement will occur principally at the shoulder-joint.

In what is called Colles' fracture of the radius, the lesion of the bone appears to be higher than it really is. According to Smith of Dublin, the usual seat of the fracture is about three quarters of an inch above the radio-carpal articulation. In the United States the lesion is found in many cases to be still nearer the articulation, and in some cases to enter the joint, the common appellation of which is Barton's fracture. The latter can be distinguished from the former by the appearance of the arm, though they resemble each other. In Barton's fracture the lateral displacement is greater than in Colle's, and the fulness on the front or flexor side of the wrist is more marked, while its dorsal prominence or the tumefaction on the back of the wrist is not so great. To distinguish either fracture from a dislocation of the wrist, the hand and arm of the patient must be grasped and subjected to extending and counter-extending forces, when the deformties will mostly disappear, and the reduction of the *apparent* luxation will be effected. But it is to be observed that the deformities and displacement will immediately recur upon a relaxation of the forces. The injury, then, differs from a luxation in two respects. If it had been a luxation the reduction could not have been so easily affected, and when accomplished the bones would have remained in place after the reducing forces had been relinquished. The injury having been distinguished froma luxation by the above process, it is not likely to be taken for a sprain, as the latter does not have the hand preternaturally drawn to the radial side of the arm, nor is the swelling characterized by the peculiar tumefaction previously demonstrated as diagnostic of fracture at the lower extremity of the radius.

The examination may be conducted with still greater care by placing a finger on the head of the radius at the elbow, and rotating the wrist with the other hand. While doing this an inexperienced person might expect that the radius would not move with the wrist if there were a fracture. But the fragments are so closely held together that they move almost in a normal manner. Not unfrequently there is a partial impaction of the lower fragment into the cancellated structure of the upper, which prevents one from moving independently of the other. If however, the fingers of one hand of the surgeon be placed upon the radius just above the fracture, and the fore-finger of the other hand be placed upon the *styloid process*, or lower fragment of the radius, while the rest of the hand exerts extension and rotation, the upper fragment will be perceived to remain fixed, and the lower to move with the carpus, and create very severe pain. The movement of the lower fragment against the upper under such circumstances *will elicit crepitation* which is the peculiar diagnostic symptom of a fractured bone; and many times the irregular borders of the lower extremity of the upper fragment can be felt.



The above original cut represents the appearance of the arm after a fracture through the lower extremity of the radius: and a splint to be used in the treatment of such fractures.

The signs of fracture in the lower extremity of the radius, and the marks that distinguish the lesion from any other, as thus far detailed, are somewhat prominent, and no practical surgeon familiar with them could make an incorrect diagnosis while examining an arm suffering from the injury. There are other points indicative of the lesion but they are unimportant. If the fracture be an inch or so above the articulation, the action of the pronator quadratus muscle upon the lower end of the upper fragment, dragging it nearer than usual to the ulna, renders the arm above the wrist a little more rotund and less flat than common.

There is another variety of fracture occuring at the lower end of the radius. It happens when a person falls upon the *back of the hand.* It is by no means a common injury, though of sufficient frequency to demand a passing notice here. The bone may break at any point within an inch or so of the articulation, and the deformities that immediately follow it, are not different from those already described under the explanation of Colles' and Barton's fracture. The projection of the ulna is marked, and the hand is drawn in the opposite direction by forces already mentioned. The deformities can be overcome by extension and counter-extension; and rotation at the same time will elicit crepitus, while the irregularities of the fractured end of the upper fragment of the radius can be felt with the finger. And upon relaxing the extending and counter-extending forces, the arm and hand will resume the abnormal appearances which are so characteristic of the fracture. The treatment of a fracture of the radius produced by a fall upon the back of the hand should not be different from that to be pointed out hereafter for all fractures of the lower extremity of the bone.

Treatment.—The treatment of fractured bones consists in coaptating the fragments and applying such apparatus as shall retain them in place until they have firmly united.

From the frequency of lasting deformities after the management of fractures, it is to be feared that those having charge of the injuries did not possess so much skill in *their* profession as the same persons would have required from a carpenter, wheelwright, jeweller, or other tradseman employed to do a job for them.

In the treatment of all fractures of the forearm care must be exercised so as not to compress the limb *circularly*, the effect of which would be to diminish the interosseous space and favor bony union between the radius and ulna, preventing subsequent rotation. The force of the pronator quadratus and other muscles dragging the bones together must be counteracted, as well as those of the supinator longus and the extensor muscles of the thumb, in the treatment of fractures of the lower extremity of the radius. A proper splint for the injury under consideration can be gotten up extemporaneously, and with a knife be fashioned from a cigar box, or other thin board. It should be shaped like a profile of the arm and palm of the hand. From its form it is sometimes called the "pistol shaped splint." To the palmar extremity and palmar surface of this splint a firm roller of bandage as wide as the patient's hand and as big as it can clasp, is to be fastened with another bandage which is used to cover the arm-portion of the splint. The roller should be bound *obliquely* upon the splint, as may be seen by the diagram serves to direct the hand as it fits snugly in its hollowed palm, to the ulna side of the arm, and thereby overcome the abnormal tendency of the hand to the opposite direction. The arm-part of the splint should be wide enough to prevent the bandage which binds it in place from circularly constricting the arm.

The splint thus prepared is to be placed upon the palm of the hand and front of the arm, and bound there with turns of an ordinary roller bandage, after the deformities of the limb have been overcome in the manner indicated to ensure a correct diagnosis. The encircling bandage is not to cover the thumb nor fingers, but they are left free to be exercised over the roller which fits in the hollow of the hand. This free motion of the fingers and thumb prevents stiffness on their part, or ankylosis. At the first dressing, especially if it be soon after the reception of the injury, and before the usual swelling has set in, care must be taken that the bandage be not applied too tightly. And it is good practice to visit the patient again within ten or twelve hours to see that the dressing, tightened by the swelling, be doing no mischief. Although it is common to retain a fracture dressing from three to five days before it is removed, the custom is not kept up by the prudent practitioner. So obstinate and servile are a certain class of physicians in following " regular rules" in the management of fractured injuries that tight dressings have been allowed to remain until paralysis, gangrene, and the very worst consequences have resulted, to say nothing of the excruciating pain that the patient has suffered from the injudicious treatment.

After four or five days have passed, a couple of compresses made by folding a strip of bandage into six or eight narrow folds, may be applied to the prominences of the back and front of the wrist, and the remainder of the dressing put on over them. These are to be worn until the deformities subside, or as long as the splint is worn.

After the first four or five dressings which should be reapplied every day, two or three days may elapse between the remaining dressings. The splint should be worn for three, four, or five weeks, according to the age of the patient, and other circumstances. No dressing is to be applied tighter than can be easily borne, or will retain the parts in place and avoid exciting irritation, ulceration and sloughing. A tight dressing is apt to provoke inflammation of the tissues surrounding the wrist joint, and to favor ankylosis in that articulation.

At each dressing while the limb is stripped, the surgeon should with one hand retain the parts in place by proper extension, and with the other rub the skin that has been covered with bandage with weak soap liniment, dilute whiskey, or other stimulating applications to restore tone to the capillaries, and prevent vecication and ulceration. The surgeon after about two weeks have elapsed from the injury, at each dressing should also make passive motion at the wrist, to obviate ankylosis.

Dr. Barton was accustomed to treat fractures of the lower end of the radius with two splints, one resting upon the back of the hand and arm, and the other upon the front of the limb with the fingers extended, but it is found that a single splint constructed like the one in the diagram is decidedly preferable. Dr. Henry Bond, of Philadelphia, uses a single splint, with a semi-cylindrical block screwed obliquely upon the palmar end of a splint-board fashioned like the one advised in this article. His splint has two strips of pasteboard an inch wide, tacked upon the edges of it to cover the arm, and prevent compression from the circular turns of the dressing bandage. "Bonds splint" as it is called, answers a good purpose in the treatment of the injuries under consideration, and may be used when the facilities for making it are at hand.

It is a matter of surprise that surgical works contain so little information concerning fractures, especially those occurring in the vicinity of joints. In the American edition of Syme's Surgery there are only *twenty-two lines* devoted to fractures of the radius.

EFFECTS OF SEVERE COLD.

BY C. T. LAWRENCE, M. D.

The effects of cold on the human body vary according to circumstances. They do not depend so much on the degree of cold applied, nor even on the extreme to which the part is cooled, as on the rapidity of the change, and the intensity of the sensation thus excited. Chossat has clearly demonstrated that the temperature of the bodies of animals killed by cold, was always higher, as the reduction of temperature had been more rapid, and therefore more quickly injurious. Original vigor of constitution has very much to do with an individual's power of resisting cold; for according to Baron Larrey, the phlegmatic Dutch, Hanovarians and Prussians, suffered much more during Napoleon's winter campaigns, than the darker and more sanguine soldiers of France and Italy; as also during the siege of Cuidad-Rodrigo, when the troops were obliged to sleep on the ground without cover, three of the Portuguese (whose vital stamina is naturally very low,) actually died of the cold in one night, while the British escaped without being frost-bitten. Mr. Osborn in his Arctic Journal states that the plethoric individuals of his party exclaimed against fire, and called zero charming weather, while those of a scorbutic diathesis suffered severely from the least exposure. He was accustomed to bathing in water every morning only 20° above zero.

This probably shows that habit as well as constitutional vigor has something to do with man's power of resisting severe cold; for all know that individuals accustomed to wear gloves suffer with cold fingers much sooner than those who habitually go without such protection.

Precaution, and the condition of the air as to motion or rest, are important points for consideration. Man has the power to exsist in the midst of great diversities of external conditions, much more so probably than most other animals, since he can not only support, but enjoy life, with proper precautions, under extremes of either heat or cold that would prove fatal to many. In some parts of the torrid zone, the thermometer rises every day during a portion of the year to 110° F. and is occasionally seen as high as 130°, and instances are on record where the body has been exposed for a considerable length of time to a dry air of 250° and 280° F., by persons unaccustomed to high temperatures. The workmen of Sir F. Chantrey, would enter a furnace while the floor was red hot, and the air within raised the mercury to 350°. Chabert the *Fire-king* was in the habit of entering an oven whose temperature was from 400°. to 600°.

The Arctic expeditionists have sustained a degree of cold equally astonishing. Capt. Parry has seen the thermometer as low as 55°., Franklin, 58, and Capt. Back as low as 70°, or 102° below the freezing point. In both cases the effects of either of the extremes are greatly influenced by the air as to motion or rest. Thus, 'every one has heard of the Sorrocco, or hot winds of Sicily and Italy, which are deathly suffocating although the actual temperature is not higher than has often been experienced without great inconvenience where the air is at rest. The Arctic voyagers assert that a temperature of 50° may be sustained when the air is perfectly quiet with much less inconvenience than is caused by air while in rapid motion, at a temperature fifty degrees higher.

Sir John Richardson states that in his last Arctic expedition, while at winter quarters he was in the habit of going a short distance from his sitting room without feeling it necessary to put on his overcoat, although the difference in the temperature of the air in his room and that through which he passed was 190°. This immunity from chilliness was chiefly attributable to the dryness and perfect stillness of the atmosphere; "but it is worthy of note, that Sir J. R———, and his party abstained entirely from alcoholic liquors, and that the experience of this voyage has fully sustained his previous convictions, that continued cold is much better borne without recourse to these liquors, than under the employment of them," Those who indulge freely in spiritous liquors, exhausted as they are by perpetual excitation, which ultimately depresses the combustive process, are much more liable to suffer from exposure than those of temperate habits. Dr. Davy states from a series of observations made upon himself, that the ingestion of *wine* has a positively depressing influence on the temperature of the body, which depression increases with the quantity taken, notwithstanding the tendency the wine has to increase the activity of the circulation and respiration.

Having thus shown that man is capable of maintaining his natural temperature, when exposed to the most intense cold, and of preventing it from being raised much above its natural standard by any degree of external heat; it would be well to inquire to what that faculty is due.

Innervation, respiration, circulation, and muscular motion are the principle actions concerned in the function of calorification. And when the body is exposed to a temperature much above its natural standard, there seems to be a frigorific influence set up by the evaporation of the cutaneous excretions which are greatly increased by exposure to external heat; and the large amount of caloric consumed in this change, is chiefly derived from the body, by which means the temperature is kept at a normal standard.

But when an individual is exposed to severe cold, while the air is in rapid motion—especially during the night—or when exhausted by fatigue, hunger, or continued watching, the efforts of the system to keep up the proper equilibrium will rapidly exhaust the nervous energy, the consequence of which is impeded circulation, respiration, and muscular mobility, which interfere materially with the functions of calorification.

When reduced to this condition, the sufferer feels an irresistible impulse to sleep, which, if yielded to, is death in its most attractive and insiduous form of approach. Dr. Solander, knowing this irresistible desire for sleep, when about to start on his botanical excursions while on the coast of Terra del Fuego, enjoined his companions to keep moving. "Whoever sits down" said he "will sleep, and whoever sleeps will wake no more." Persons so exposed if they are aware of their condition may keep up a long time by force of will, and muscular motion, and should the latter give unmistakeable evidence of failure, vitality may be prolonged by wrapping the body up in snow. "This kind of death, however, may be only temporary" and when so, the sufferer "is found to be very pale and cold: the respiration and pulse almost imperceptible, and the pupils dilated; but the limbs are flexible as long as life remains." He may be awakened from this sleep of death by a gradual restorative of the vital stimuli, for this sort of death is produced from a cessation of the functions of life, rather than molecular change from disorganization. And the same means should be resorted to as in cases now resulting from nervous shocks, pressure on the brain, etc., taking the utmost care in the application of warmth.

If the trunk of the body be well protected the cold may affect only the extremities or parts that are exposed, such as the nose and ears. In such cases the first visible effect is a peculiar dull color, depending most likely upon venous congestion, but if the cold continue, the venous blood disappears from a constriction of the tissues; and the surface becomes white, or of a tallowy paleness, quite insensible, and motionless. The part is in fact dead, or it is said to be *frost bitten.* Mr. Osborn describes frozen feet as looking like lumps of solid ice.

The patient may be unconscious of the accident that has befallen him until it is told by some one near him, especially if it be his nose or ears that are frozen. It is only by occular proof that one can be satisfied of the safety of those parts likely to be frost-bitten. The deadening of a frost-bite is generally temporary, but it may mortify by *direct sphacelus.*

The degree of cold required to produce these results must depend in some measure upon the length of time the person has been exposed, and the state of the system at the time, but under any ordinary circumstances of exposure, the degree of cold required would be considerably below the freezing point. Mr. Guthrie states it at ten degrees below zero, of Fahrenheit.

The treatment required for frost-bites is, first to produce *moderate reaction*, and secondly to avoid *excessive reaction*, which would result in dangerous inflammation; haste is more dangerous than delay, though no time should be lost after the discovery of the accident. Snow well rubbed upon the parts is the best, as well as usually the most convenient remedy, for this accident never occurs, but when snow or ice is to be had; the latter to be used if the former can not be obtained. At first rub the parts very gently, gradually increasing the friction, until they become sensible, then the hand or a piece of soft flannel may be substituted for the snow. At this juncture of the case, the patient if the frost-bite be extensive will become very thirsty and should be allowed as much cold water as he desires. These applications should be made out of doors, or in a room where there has been no fire for some time, and a high or even moderate temperature should be avoided for several hours. By strict attention to these means no serious consequences will ensue in ordinary cases, save a slight swelling and a peculiar pricking or tingling sensation, although the part may be very weak for some time. But by injudicious treatment, or by a careless application of the above means, very serious consequences may follow. *Violent gangrenous inflammation* may speedily follow the applicatian of heat to frost-bitten parts. It may be produced by raising too suddenly the temperature of a part which has been long exposed to cold, although it may not be frozen. Baron Larrey gives an account of several cases of gangrene produced in this way at the battle of Eylau. A portion of the soldiers were exposed to the most intense cold without being able to take the least exercise for twenty-four hours and no complaints at the time were heard of its effects; but on the following night a sudden thaw commenced, and immediately they presented themselves in great numbers for treatment. "They complained of severe numbness, and weight of the feet. Some upon examination were found to have slight swelling and redness at the base of the toes and dorsum of the foot, whilst the toes of others had already become black and dry. And in this manner toes and sometimes the whole foot perished, the mortification being so rapid, that it was difficult to say whether it was proceeded by inflammation or not."

The application of snow as directed, followed by evaporating lotions, if employed early, may prevent gangrene, and if it has set in they should be used to prevent its spreading. After the line of demarcation is determined, stimulating applications should be made to hasten the separation of the sloughs, and to promote healthy granulations.

Chilblains are produced by sudden alterations of temperature. Warming the foot and hands by the fire when damp and cold, is the most frequent cause. The best treatment is perhaps local stimulation, in combination with astringents, but it should be varied according to the stage and character of the case. If indolent, any of the stimulating liniments of the shops may be applied cold, and with considerable friction. If there are vesications, care must be taken not to break them. Make the application with a soft brush or feather. If the parts become ulcerated, make applications directed to the kind of ulcer it is likely to become. If the parts become irritable, use soothing applications.

The following liniments are probably among the best in use.

℞.	Acid. Tanici.,	ʒj.	
	Camphoræ Tinct.,	f℥ij.	M.
℞.	Calcis Chlorid.,	ʒj.	
	Aquæ pur.	f℥ij.	M.
℞.	Morphiæ Sulph.,	grs. v.	
	Acid. Tanici,	ʒj.	
	Glycerine,	f℥ij.	M.
℞.	Liniment. Saponis,	f℥vj.	
	Ol. Terebinth.	f℥j.	M.
℞.	Collodion,	f℥j.	
	Terebinth. Venet.,	℥ss.	
	Ol. Ricini,	fʒij.	M.
℞.	Ol. Terebinth.	f℥j.	
	" Olivæ,	f℥iij.	M.
et adde—	Acid. Sulphuricum,	f℥j.	

These may be applied as directed above,

All writers agree that snow is the first, and in all probability the best agent attainable, for the restoration of the circulation and sensibility of the parts; but they have thought it best, I suppose, not to enter into an explanation of its therapeutical action, further than to say it prevents any excessive reaction. This does not satisfy me. May not snow possess other qualities than cold. Does it not take on, at the moment of crystalization a great amount of electricity, which is rendered latent, and which it will yield up to whatever body it comes in contact with, having a greater amount of caloric than it possesses; and does not friction generate caloric and electricity both, especially if one of the substances used contains a very great amount of latent electricity as is supposed to be contained in snow. If these premises are based upon correct principles may we not conclude that its electricity has more to do with the restoration of sensibility and mobility to the parts, than a mere prevention of excessive reaction. The application of cold as a therapeutical agent will be found in many diseases the most certain, speedy, safe and agreeable agent attainable, and for a more detailed account of its great value and mode of application, the reader is referred to the College Journal for Dec. '56.

EDITORIAL DEPARTMENT.

UNFORTUNATES.

In the College Journal for February last we endeavored to hint at some of the many evidences and results of the spirit of *Progress* which is the peculiar characteristic of what is demonstrated *modern* times, in contra-distinction to those of by-gone ages when humanity looked backward to that golden age, long past, which the poets and the writers of fables of other days loved to depict, but always with the hopeless sigh which accompanies an absence of faith in humanity and God, and which leads to the supposition that man is degenerating.

We entertain no desponding, hopeless fear which would lead us to look to the past as the blessed time, and the future with doubt or despair. Our faith in progress, reform, and consequent improvement is stong, active, and unwavering, and our hopes are strengthened by constantly increasing evidences that man is becoming better and better acquainted with the world both material and mental, and as a consequence, with the duty he owes to his Maker and to his fellow man.

Evidences which sustain this hope and faith are scattered in profusion on the pages of the world's history, but there are none perhaps, which are more hopeful or more conclusive, than those presented in the modern care bestowed upon the *unfortunates* of the great human family.

Formerly, it may be, the hearts of the people were made to feel for the insane, but the intellect had devised no better mode of dealing with those who had lost intellectual control of themselves, than to chain them up where they could not harm others, while their confinement, and their deprivation of all the intellectual and social, as well as animal comforts, and often the necessaries, and even decencies of life, tended inevitably to hinder their cure and aggravate all their intellectual, moral and physical maladies. When the great hearted, the humane and far-seeing Pinel first dared to break off the chains of the maniac, throw open the door of his worse than prison house, bring him forth from filth and impurity of atmosphere and person, into the enjoyments of the light of heaven, the breath of the breeze, and the smile of humanity and hope, he did more for his race than any warrior of ancient or modern times.

Since this act of wonderful heroism, judgement, and humanity, nearly the whole of civilization has changed its conduct, and its opinions in regard to the insane, and now they are cared for at public expense if they have not the individual means to meet that expense, surrounded with all the comforts, safety, care and attention which the powers of government and enlightened, scientific humanity can bestow; and thousands are yearly, by these means, restored to society, their families, and *themselves.*

The blind and the deaf have also had their claims allowed, and they too, are taken care of, relieved if possible, and instructed to become a benefit instead of a burden to themselves, their friends, and the public. In many instances, even the deaf have been taught to speak and to read the speech of others from their lips, so that the eye in a measure has taken the place of the ear. The blind have been taught such handicrafts as they can pursue without the aid of sight, and thus these unfortunates have become self-reliant and independent, and a source of profit, instead of a burden to the community.

Dr. Guggenbuhl was not repelled by the repulsiveness of the Cretins and Idiots, whose ill-shapen limbs, bleared eyes, dull ears, enormously distended abdomen, muttering gibberish, and extremely debased lusts and habits, and almost entire want of intelligence, or even the rudiments of anything deserving the name of a mind, which led the Romans to call them "Cretiræ" *creatures*, and not *human*, and which also led the whole world for centuries to look upon them as a class of unfortunates entirely beneath the power of men to elevate.

After passing a couple of years in studying the mental and physical diseases of these sufferers, he commenced in 1840 his labors for the improvement of those he had taken into his household. His success attracted the attention of many philanthropists, among whom were Horace Mann, then State Superintendent of the Common Schools of Massachusetts, and Dr. S. G. Howe, who had charge of the Asylum for the blind at South Boston. It is probable that Dr. Wm. M. Awl, at that time Superintendent of the Lunatic Asylum at Columbus Ohio, was among the first, if not *the* first person who called the attention of State governments to the propriety of Idiotic Institutions in the United States. His efforts were as early as 1844.

Attempts had been made to instruct idiots earlier than the establishment of Dr. Guggenbuhl's school at Abendberg. As early as 1818 such attempts had been made at the American Asylum for the Deaf and Dumb, in Hartford Connecticut. In 1824 Dr. Belhomme of Paris published his essay on the possibility of improving both the physical and mental condition of idiots, which probably was the cause of a few of this class being instructed for a short space of time at Bicetre, a large Insane Hospital in Paris in 1828, and in 1831, by Falert at the Salpetriere, another of the Hospitals for the Insane in Paris. Neither of these attempts, however were prosecuted long. Two years later, in 1843, Dr. Vossin attempted an organization of a school in Paris, solely for the instruction of idiots, but he did not succeed, and in 1839 he and Dr. Leuret revived the school at Bicetre, which afterwards was placed under the charge of M. Vallee.

But in France, he who has done most to attract the attention of the people to this class of unfortunates, was Dr. Edward Seguin the pupil and friend of the celebrated philanthropist and surgeon, Itard. This noble man, even on his death bed reminded Seguin of the efforts Itard desired to make for the amelioration of their condition, and he reminded Seguin, who was then quite young, that he owed to them and to humanity that he consecrate his entire energies and life to the endeavor to elevate the helpless idiots in the scale of humanity.

Seguin endeavoured to become master of the philosophy of idiocy. We know that in China the feet of the female infants are compressed, and by systematic bandaging the toes are first turned under the foot, then the foot is made to bend, until finally, the toes and heel are made to blend together in an apparently inseparable mass, while the constant pressure of the bandages prevents growth or development, until the foot assumes the small, conical, and useless form which the celestials consider essential to accord with their ideas of beauty and gentility. If the feet of the Chinese females can be thus distorted and dwarfed by a long continued course of compression, it is but natural to infer that the minds of idiots, which are like those of undeveloped infants, can be made to expand and grow, by means of a proper course of training and unfolding.

With this philosophy for his guidance, and following the teachings of Nature as developed in infants, Dr. Seguin has met with wonderful success in his school; and his Treatise, published in 1846, must for a long time to come prove an invaluable aid to all who have to teach this class of unfortunates.

While Dr. Seguin had been laboring in Paris, and Dr. Guggenbuhl at Abendberg, Herr Saegert, a teacher of deaf mutes at Berlin, had failed to instruct a deaf and dumb idiot, and hence was led to a more careful study of them. In 1840 he received idiotic pupils in his school, and has maintained it until the present time. His success, as well as that of Dr. Seguin and Dr. Guggenbuhl led some benevolent ladies in England to establish schools on a small scale at Bath, Brighton, and Lancaster. Dr. John Conolly, who had been an active and ardent advocate of the non-resistent system of treatment for the insane, the Rev. Dr. Andrew Read, and Sir. S. M. Peto, united their efforts in 1837 to establish an institution on a larger scale than those at Bath, Brighton and Lancaster. They rented extensive buildings at Highgate, and at Colchester where these unfortunates were cared for and instructed, and in the mean time funds were collected, and the Royal Institution for Idiots, large enough to contain near five hundred beds was completed in 1856. Others are accommodated at Essex Hall which has been arranged as a permanent school; and two small private institutions have been established in Scotland.

In our own country, as has been shown, those connected with the Asylums for Deaf mutes and the Insane, made attempts to instruct and improve the idiotic and imbecile; while probably Dr. Awl was the first to call the attention of State government to their duty in this regard. But the first school specially devoted to idiots was that of Dr. H. B. Wilbur, then of Barre Mass., but now having charge of the New York State Asylum of Idiots at Syracuse. The school of Dr. Wilbur was a private one. It was opened in July, 1848. The Massachusetts Experimental School was opened in the October following. Although the State School was under the superintendence of the great and good Dr. S. G. Howe at South Boston, the more immediate care and instruction of the children was given to M. B. Richards, who, if we are not mistaken, at first had the care of the Pennsylvania Training School for Idiots, which is now under the control of Dr. Parish, who also has a school near the city of New York.

Massachusetts took the lead of the States in this good work, but New York established the School at Syracuse almost immediately, and was soon followed by Pennsylvania, and more recently in 1847, by Ohio, whose school was opened on the 3rd. of August last, under the charge of Dr. R. J. Patterson, at Columbus.

Those having the charge of Insane Asylums in other States have made great and continuous efforts to call attention to this class of unfortunates, and there is reason to suppose they will not cease until the people and the governments realize their duty, and provide them appropriate institutions. Dr. W. S. Chipley of the Eastern Lunatic Asylum of Kentucky, has appended to his last Report, extracts from the reports of various shools for Idiots, which are extremely hopeful and encouraging.

But modern humantity, philanthropy, and that *faith* in progress and improvement which manifests itself in works has not been confined to the Insane, the Blind, Deaf, and Dumb, and Imbecile but it has extended to other classes of unfortunates, until many who formerly were considered beyond the pale of any humanitary effort are now thought the proper subjects for the most intense care and consideration.

Howard did not visit the prisons of England and demand an amelioration of the condition of the felons and the debtors confined therein without giving his thoughts and acts to the world. And both in Europe and America those thoughts are now the deeds of many of earth's foremost and noblest men, who are continuously striving to conceive and carry into actual realization, methods for benefitting the unfortunate victims of the errors of their own organization, and of society, until they have been properly confined as *felons* beyond the power of doing harm to others.

These Prison Discipline Associations, and those connected with them are silently but speedily solving some of the deepest problems in humanitary science, and are among the most powerful appliances for aiding human progression.

Those sick in body have asserted their claims upon humanity from the earliest times of which we have any record, but the sick in sense, in intellect, or in morals, have been viewed in their proper relations to their brother man, only within comparatively quite modern times.

The duty of the public to give an education to the children and youth of that public, and at public expense, has been practically admitted by many of the more enlightened people of the world. But there have been found children whom we do not consider sick, and who are neither insane, blind, deaf, dumb, nor idiotic, and yet who are so constituted, or are surrounded with such influences that they need a peculiar kind of care, to protect them from harming themselves and others.

The victims of Intemperance and Licentiousness, very properly have Houses of Refuge, and of Rescue, where they are protected, cared for, and if possible, cured of the *habit* of sin and error, which habit is often far too powerful to be overcome by any strength left to those who have yielded to it. In the cities especially there are those who have by inheritance, heired such peculiar conformations and habits of body, mind and morals, as to render them entirely incapable of being managed by the ordinary rules and usages of society.

These peculiarly unfortunate children of the habits and vices which abound among the ignorant and the poor of cities, these *Children of the City*, as they have been properly styled, have ever presented a series of problems for the solution of the legislator and philanthropist.

As long ago as 1832 Dr. Witchern of Hamburg, who had completed his theological studies at Gottengen and Berlin, and had returned to his native city two years previously, proposed to his friends to establish a House of Rescue for the more degraded among the children of the city. Private efforts were aided by a legacy of $17,000, by means of which a small place at Horn, four miles from the city of Hamburg was purchased in November 1833, and Dr. Witchern with his Mother and three of the worst boys he could find in Hamburg took up their residence at their new House of Rescue. In the course of a few months they were joined by twelve more, and afterwards by many others. In 1834 he erected another building, and afterwards workshops, and other houses in which reside his pupils and the assistants who have the care of these boys, were erected from time to time, until the *Rahe Haus* demesne, at Horn, has grown into a hamlet, and the thirty-five acres of ground is beautified with lawn and lake, plant and forest as well as fruit trees; presenting the varied beauties of a well-kept landscape-garden.

In this country we have Hospitals for the sick, Asylums for the Insane, Schools for the Blind, the Deaf and the Dumb, and the Idiotic, Homes for Widows, Houses of Refuge for the victims of licentiousness and other vices, Reform Schools for juvenile offenders against morals and the welfare of society, Retreats for the Inebriate, and other appliances for benefitting the *unfortunate classes* of Community; but the perfect love which embraces all these various classes, and casteth out *all* fear of the propriety and hopefulness of efforts for their amelioration is not as wide-spread and universal as is desirable.

One notable fact can be discerned in the history of all these enterprises. Our profession have nearly always taken the lead in them, and without exception, physicians have been among the foremost and the most active to carry into practice all endeavors to elevate the unfortunates of the human race. Our endeavors are not and should not be confined to the restoration of the bodily sick. All nature is within the domain of our profession, and to elevate mankind, the highest order of earth's inhabitants, at all times and places, is our pleasure as well as our duty.

BOOK NOTICES.

Annual Announcement of Lectures in the Medical department of the University of New York, Session of 1858. With a Catalogue of Graduates.

Through the kindness of Prof. Martyn Paine we have been favored with this pamphlet, from which we learn that during sixteen years past this University has graduated 1847 students.

Prize Essay. The Excito-Secretory System of Nerves. Its relations to Physiology. By H. F. Campbell A. M., M. D., etc. Extracted from the Transactions of the American Medical Association, 1857.

In the College Journal for December last we had occasion to make some remarks in regard to priority of discovery respecting the system of nerves treated of by Prof. Campbell in his Prize Essay. As we expect something more on the subject soon we defer a notice of this pamphlet for the present.

Report of the Board of Managers of the Eastern Lunatic Asylum for the year 1856-7.

First Annual Report of the Trustees and Superintendent of the Ohio Asylum for the Education of Idiotic and Imbecile Youth, to the Fifty third General Asembly for the year 1857.

Among the most valuable and instructive publications issued, are these Annual Reports of the various Asylums. We always read them with great pleasure and profit. We regret that the latter of the above reached us to late too contribute to our Editorial on Unfortunates.

PERIODICALS.

The American Druggist's Circular, still grows in favor both with Druggists and Physicians. The number for March is very valuable.

American Journal of Pharmacy.—This bi-monthly for March is filled to repletion with valuable papers. No one can read it without obtaining information of more value than the cost of the yearly subscription.

American Dental Review.—The first number of this quarterly from *St. Louis* gives promise of a very able new periodical.

The Dental Register of the West. The March number, like its predecessors, is excellent.

EDITORIAL ABSTRACTS.

Hydrocotyle Asiatica.—Of late this plant, a native of India, has attracted considerable attention. Dr. Horsefield speaks of it as a valuable uragenatic medicine. Cazenave has administered it in a great variety of cases of skin disease. The dose of the dried herb is from three to five grains.

Coffee and Lemon-juice in Ague—Von Holbeck is accustomed to treat Ague as follows: Infuse an ounce of well-roasted coffee in three ounces of boiled water, strain, acidulate with lemon-juice. The whole to be taken at once, five hours before the expected ague.

Hufeland's Face-wash.—Mr. Vonoge, of Paris, has found that in those cases of red spots or efflorescence of the face, so often seen in young people, that washing them several times a day with Hufeland's formula, a most excellent remedy. It consists of

Borax, two parts,
Orange flower, and
Rose water, of each fifteen parts.

Tincture of Capsicum.—Dr. Turnbull has found this of service in chilblains, by suturating a sponge or flannel in the concentrated tincture and rub the parts until a strong tingling or electrical feeling is produced. He says it never produces excoriation, unless the skin be broken. He also has used it in toothache, by putting a drop or two of the tincture on some cotton, and then apply to the part affected. The relief will be immediate.

MISCELLANY.

THE APPLICATION OF ANODYNES DIRECTLY TO DEEP SEATED PAINFUL POINTS.

The direct application of anodynes to painful deep seated tissues, as recommended by Dr. Alexander Wood of Edinburgh, has proved successful and satisfactory in so many cases that it may now be considered one of the substantial improvements in medical practice. The instrument used is a small syringe with a slender steel nozzle. This can be forced into the tissues to the depth of one or two inches as the seat of the neuralgic pain may require, and be made to inject a few drops of a strong solution of morphia or other anodyne preparation, which is thus left in contact with the suffering nerves. The plan is particularly adapted to the treatment of sciatic pains of an obstinate character. The nozzle of the instrument may be plunged to the depth of an inch and a half, just behind the great trochanter, or along the course of the painful track, and the anodyne fluid may be made to inject the tissues at the bottom of the puncture.

Generally a sudden arrestation of pain follows the injection, and a repetition of the operation every second or third day for three or four times serves to relieve every case, and radically cure a large proportion of those treated. The internal use of the valerianate of ammonia, iron, and quinia in connection with the injections, seems to hasten the process of a lasting cure. But the relief from the injection is instantaneous and not followed by unpleasant results. It is suggested that paralysis may be successfully teated by this novel method of applying therapeutic agents.

The instrument adapted to the performance of the above operation is manufactured by Tieman of New York, and Max Wocher of this city, surgical cutlers. The instrument is useful for injecting the inguinal canal for the radical cure of hernia when that method is adopted, and for injecting aneurismal tumors. The delicate trocar and canula, commonly denominated an "exploring needle," with a syringe whose nozzle shall accurately fit the expanded mouth of the canula, may be used as a substitute for the instrument first alluded to.

BACK NUMBERS OF THE JOURNAL.

We will endeavor to supply our subscribers with any missing numbers of both the first and second Volumes of the College Journal they may need to complete their sets, and in order to enable us to do so we hope all who have any to spare of either volume will return them to us directed to the "College Journal, Cincinnati, Ohio." *It is not necessary to prepay the postage.*

ERROR CORRECTED.

In the College Journal for December last, on page 534, near the middle of the page, the printer. made Dr L. E. Miller say: "Nitrate of *Silver*, pure" when the manuscript read, "Nitrate of Soda, pure." Other typographical errors have occurred, but none as likely to produce harmful results if allowed to remain uncorrected.

MARRIED.

On March the 1st, in Rushville Ind., at the residence of the Rev. James Haven, E. D. Beher, M. D., to Miss Wahala W. Haven, both of Rushville.

DIED.

At Lowville, New York, on the 12th March, Eli Townsley, M. D.

THE

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ORIGINAL CONTRIBUTONS.

GLYCERINE.

BY PROF. J. F. JUDGE.

THOSE substances known as fixed oils were for a long time supposed to be proximate principles, but as early as 1789, Scheele discovered that after the process of manufacturing lead plaster, a sweet principle remained and did not enter into the composition of that compound. This so far as we know is the earliest mention made of the substance Glycerine. It was called by him the sweet principle of fats. After the lapse of a quarter of a century its nature was closely inquired into by Chevreul, who established the fact that glycerine is the base of most fats and fatty oils.

The varying consistency of the different fats and fatty oils is due to their difference of composition, that is, to the different acid principles entering into them. Several salts, so to speak, of glycerine and fat acids exist, the more important are known as Margarine, Stearine, and Oleine. The first, *Margarine*, is a compound of margaric acid and glycerine. It is a solid fatty body, possessed of a white and pearly aspect, and melts at a temperature of 116° Fh. *Stearine* is a compound of glycerine with a fatty body known as Stearic acid, it is solid, white and friable, is insoluable in water and nearly so in alcohol, it is not as readily fusible as margarine since the temperature required is about 130° Fh. *Oleine* is also a compound of glycerine with an acid principle which is known as oleic acid. Oleine differs from the other bodies already mentioned in being a fluid fat or oil. It is owing to the mixture of two or more of these three bodies, in various proportions that we have solid, fluid and semifluid oils and fats.

When these fatty compounds are treated with alkalies or bases, such as Soda, Potassa, Lime, Baryta, and protoxide of Lead, they displace the glycerine, and entering into combination with the fatty acids form a class of compounds known as soaps. The principle sources of impure glycerine are to be found in the residuary matter left from the proceses of manufacturing lead plaster, soap, or stearine candles. The glycerine obtained from either of these processes needs to be purified. That which is obtained from stearine candle-making is generally preferred. It may be purified by the following process: After concentrating the solutions by boiling, sulphuric acid is to be added to remove the lime which is always one of the impurities; the boiling is continued with occasional agitation for a considerable period to drive off any volatile fatty acid present. If an excess of sulphuric acid has been added it may be removed by the addition of carbonate of lime. The liquid should be allowed to cool several times to facilitate the deposition of the sulphate of lime formed; finally when sufficiently concentrated it should be filtered and washed with animal charcoal. Even as thus prepared, glycerine is found often to contain some impurities. Of late it has been shown that the separation of glycerine and the fat acids may be accomplished by the aid of heat and watery vapor alone. This is effected as follows: The fat or oil, being placed in a distillatory apparatus, steam of a temperature near 600° Fh. is admitted to the same, when the fat acids take up water and become hydrated, while the glycerine does the same and is likewise hydrated; thus is effected the separation of the glycerine from the fat acids; heat is then applied to the boiler and the whole contents distils over together. Upon condensing in the receiver the difference of specific gravity determines the separation; the glycerine being most dense sinks to the bottom of the vessel, while the fatty acids occupy the upper portions and may be removed with a syphon. The glycerine thus obtained generally contains an excess of water which may be removed by gentle evaporation, when it should have a specific gravity of 1.26 at a temperature of 60° Fh. and contain 98 per cent. of pure glycerine.

Pure glycerine possesses the following properties. It is *neutral* to test paper, being neither acid nor alkaline in reaction. It is intensely sweet to the taste, is colorless, does not possess any odor, is a rather viscid liquid much resembling pure syrup, and has a specific gravity of about 1.28. Glycerine is freely soluble in both water and alcohol, but not in ether. It is not capable of conversion into alcohol by fermentation, but when mixed with yeast and kept in a warm situation it is converted into a substance known as Propionic acid. Exposed to an elevated temperature, glycerine volatalizes with decomposition, giving rise among other products, to the substance Acroleine, which is possessed of a very penetrating odor and very irritating properties. Nitric acid converts it into oxalic acid. The elementary composition of glycerine is $C_6 H_7 O_5 + HO$. When treated with sulphuric or phosphoric acids, combination ensues giving rise to sulphoglyceric and phosphoglyceric acids.

When glycerine is prepared from the residual matter in the preparation of lead plaster it generally contains some traces of lead, rendering it under such circumstances positively injurious as a remedial agent. Of those articles offered to the profession as *pure* glycerine a large proportion contain impurities, the most frequent of which are oxide of lead, lime and sulphuric acid. The lime and sulphuric acid occur in those specimens of glycerine which are prepared from the residual matter of candle works, the lime being used to separate the fatty acids, while the sulphuric acid occurs through the use of an excess of that reagent in the precipitation of lime from the glycerine in the purification of the latter.

The presence of lead may be detected by the following tests: Oxide of lead gives with sulphuric acid a white precipitate, the sulphate of lead; with hydrosulphuric acid a black precipitate; and with bichromate of potassa, a yellow precipitate.

When sulphuric acid is present glycerine will give an acid reaction with litmus and should therefore be refused as unsuited for remedial purposes. If lime is present it may be shown by its yielding with oxalate of ammonia a white precipitate.

Whenever glycerine is used as a remedial agent, whether its application be external or internal, it should be as pure as possible; and it will generally be found best to prefer that which has been prepared by the action of vapor of water, at an elevated temperature, to all other articles as being least liable to impurities.

Glycerine was introduced to the profession as a remedial agent in diseases of the ear, some ten years since, and has proven of great use also in diseases of the skin. More recently it has been proposed as a substitute for cod-liver oil in strumous and phthisical diseases.

Very great benefit has been derived from the use of glycerine in deafness. In regard to its use in this malady surgeon Wakely remarks: "The success of the new remedy, in these and many other instances, has attracted much notice, and I have now used the glycerine in upwards of three hundred cases of deafness. On many occasions it has been employed without any advantage whatever. In other instances the benefit was considerable for a short time, and then disappeared. In numerous cases, however, by the use of it, the power of hearing has been completely restored. It was only after much experience in the application of glycerine, and from observing its action in a great number of cases, that it could be ascertained what were those conditions of the ear in which it was most likely to prove of advantage. Contrary to what might have been anticipated, the use of the remedy was successful in cases of long standing, one, for example, thirty years; and also in cases where the existence of the malady could be traced to the eruptive fevers of childhood."

In instances of deafness caused by inflammation, followed first by suppuration, and then by a horny, dry condition of the auditory canal, the application of glycerine has been attended with signal advantage. Equally marked and peculiar is the success when used in cases attended with a partial or total absence of ceruminous secretions. In many cases of deafness belonging to these classes the use of glycerine has been followed by a perfect restoration of the sense of hearing. Its use in cases of thickened and hardened tympana, presenting upon examination with the speculum a whitish or pearly aspect, has been followed by the most gratifying and beneficial results. It is clearly established that the application of glycerine may be resorted to with equal propriety both in cases of destroyed tympanum and in those where it still exists.

When the surface of the aural canal is dry and shining, the ears should be carefully washed out by a piece of cotton well moistened with warm water and held in a pair of delicate forceps. This should be repeated several times, after which the canal may be carefully dried with fresh cotton. After the cleansing has thus been accomplished as well as is practicable, the glycerine should be applied in like manner upon cotton-wool, and well distributed upon the surface of the canal and tympanum. In some cases the tympanum, as well as the membrane of the canal, is coated with a hardened and impacted secretion. In such cases it will be found best to allow a few drops of glycerine to fall upon the tympanum, afterwards apply cotton moistened with the same, and finally close the external opening of the ear by fitting to it a plug of bees-wax well softened in hot water, or other suitable substance, that the glycerine may not escape. This operation should be repeated daily, taking care to wash the ear by syringing with warm water before each successive renewal of the glycerine, till the hardened wax becomes sufficiently softened to permit of easy removal, when it may be removed by some suitable instrument, provided sufficient care be taken to avoid the application of too much force upon the tympanum, which from its delicacy is liable to rupture or injury from the application of very moderate pressure. After the removal of the wax, the application of the glycerine may be continued as in other cases if necessary; taking care always that the tympanum now relieved from its hard incrustation be not exposed too early to the unobstructed action of the atmosphere.

Subsequently to the introduction of glycerine as a remedy for deafness, Mr. Sartin, a London surgeon, was induced to try it in several cases of skin disease attended with dryness of the surface. His first trial was satisfactory and led him to a more extensive application of the remedy, when he found that its undrying and antiseptic properties were of very great use in the treatment of those diseases of the skin which require shielding from the oxydizing tendency of the atmosphere as well as when it was desirable to retain a moist condition of the surface by preventing evaporation, or even inducing the absorption of moisture. He used it with beneficial results in cases of ptyriasis, lepra, psoriasis, lichen in its dry stage, and prurigo. The remedy has also been found of decided use in cases of herpes exedens, as well as in syphilitic and strumous eruptions when combined with other remedies, in the form of lotions, especially in those cases which tend to form fetid discharges and hard incrustations. It has proven of very decided service in the scabbing stage of small pox, in which disease it may be combined with Iodine, and thus at once may we derive the benefit of both these useful remedies in this loathsome disease, and by their judicious application prevent the "pitting" which is so common. Ioduretted glycerine may be prepared as follows: dissolve in two parts of glycerine, one part of iodide of potassium, and add to this one part of iodine which is readily dissolved. This preparation may be advantageously used in many cases where the application of iodine is desirable, especially when it is important that it should be absorbed as is usually the case.

Glycerine has also been recommended as an external application in scarlatina. Dr. H. W. King says that he has found the anointing of the whole body except the face and hands with the following prescription of decided benefit. The body having been thoroughly sponged with warm water:

℞. Glycerine, f℥j.
Creosote gtt., ij. M.

Glycerine is one of the very best applications to chaps of the hands, face, or nipples. The following will be found useful in chaps and in dandruff:

℞. Glycerine, fʒj.
Borax, grs. x.
Rose water, f℥vij. M.

The removal of corns is very readily accomplished by moistening frequently with glycerine, which softens them so thoroughly that they may be scooped out with little difficulty. The article under consideration is capable of so many applications that space will not permit of their notice; but sufficient has been said to indicate to the judicious physician the indications for its external use. The special application must be left to his judgement. In short, whenever we wish to retain a moistened surface, exclude the air and prevent putrifaction glycerine will be found a useful remedy. The antiseptic properties of glycerine have been fully proven, for meats of different kinds, as well as fishes have been preserved in it for a considerable period without change, the latter retaining all their brilliancy of color.

Several years since Dr. Crawcour stated that he had been using glycerine as a substitute for cod-liver oil, and was much pleased with its effects. He states that it may be administered internally with perfect safety. He says, that "it possesses all the remedial virtues of cod-liver oil, without disordering the digestion." He thinks that in addition to its antistrumous properties, that it facilitates the absorption of the salts of iron, especially the iodides. He gave glycerine to his patients in from one to three fluid drachm doses, added to an ounce of water, and repeated the same three or four times a day.

A writer in the N. W. Med. and Surg. Jour. says: "For cases of tubercular disease in its early stage, before the cough is accompanied by much expectoration, we frequently prescribe:

℞. Glycerine, f℥ij.
Iodide Potass. ʒj.
Sulph. Morphia, grs. ij. M.

And give a teaspoonful before each meal, and at bed time. If the disease is further advanced and expectoration more copious, with rapidly increasing emaciation, we prefer the following:

℞. Glycerine, f℥ij.
Syrup. Iodide of Iron, f℥ss.
Sulph. of Morphia, grs. ij. M.

and give one teaspoonful every four or six hours."

The same writer states that it is now two years since he commenced using glycerine in the treatment of phthisis, generally combining it with some preparation of iodine, and just sufficient morphia to allay cough and promote rest; and concludes by saying, "we have certainly derived more benefit from it than from any other remedy."

That glycerine may take the place of cod-liver oil is as yet not an established fact, but so far as experiment has gone there appears to be considerable reason for supposing that it will prove a successful competitor as a nutriant and restorative. With reference to its nutriant properties, Dr. Lindsay remarks: "For the space of a month I took two tea-spoonfuls every morning in coffee, which I found to be the most palatable mode of using it. My diet and daily occupations were the same as before I began to take it; my exercise, in consequence of protracted bad weather, rather less than usual. The result was a gain of weight to the extent of one and a half pounds at the end of two weeks, and of an additional half pound, at the fourth in all, an increase of two pounds in weight. On discontinuing the glycerine my weight gradually fell; and after an interval of six weeks, during which I had not used it, I find myself one pound lighter than before I began to take it daily. It produced no other appreciable effect." Dr. Lindsay also gave glycerine to eight patients—four males and four females—to whom it was given in two or three teaspoonfuls and tablespoonful doses daily for the space of one month. He further states that they were all weighed at intervals to ascertain whether they had actually gained or lost flesh, for says he, "I have found that apparent physical improvement is no reliable criterion of real physical growth." All of these patients were, before taking the remedy, "more or less anæmic, emaciated, and feeble; in all, the diet, exercise, and occupations, were otherwise the same." At the end of the month they were all apparently "greatly improved in their general condition; they seemed plumper and stronger, and the countenance, in some, was even ruddy."

Dr. Stirling gave it in three teaspoonful doses daily, in connection with one half grain of quinia to a "delicate, emaciated, cachectic, strumous boy eight years of age; the improvement in general health was most marked and rapid." Dr. Deighton reports favorably of its effects in chronic gastritis; another physician reports it to have "worked wonders" in an affection of the mucous coat of the stomach. This testimony appears to favor the probability that glycerine may prove a valuable nutriant, and may yet be successfully administered in all that class of diseases in which cod-liver oil is now employed. This question is one of importance, since glycerine unlike cod-liver oil, does not gripe, purge, nauseate, or possess a disagreeable taste or odor, it is therefore to be hoped that the profession will try the remedy and note the results, publish the evidence pro or con and let the question be thus settled.

Finally, glycerine is very useful as a solvent, holding in solution some substances not readily soluble in alcohol or water. It dissolves iodide of potassium, tannic acid, hydrochlorate of morphia, sulphate of quinia, nitrate of strychnia, atropia, brucia, veratria, phosphorus, oxide of lead, most deliquescent salts, sulphates of soda, potassa, and copper, nitrates of silver and potassa, as well as many other bodies.

If to forty parts of collodion one part of glycerine be added, the compound collodion thus formed possesses sufficient elasticity to prevent its cracking. If one part of gum Arabic be mixed with five parts of glycerine it will form a transparent mucillage, while three parts of gum Arabic and one of glycerine forms an adhesive and elastic paste. A small quantity of glycerine added to a pill mass will prevent its becoming too hard by keeping, and therefore promote its solution when taken into the stomach. Much more could be added, but enough has been said to call attention to the chief points of merit in this truly useful remedy.

SPASMODIC ASTHMA.

BY T. C. MILLER, M. D.

Asthma, although a very common form of disease is seldom treated with any degree of fullness in the works on practice, and by some writers is denied to exist as a disease *sui generis.* We find on careful examination of the reports of cases in books and medical periodicals, that many of the so-called cases of Asthma are derangements of breathing caused by disease of the heart, the blood vessels, the lungs; and other diseases, or complications of those diseases with a true and genuine spasmodic contraction of the muscles surrounding the bronchial tubes. At times too, there is a disease or derangement of the *nerves* of respiration which produces asthmatic symptoms, and is therefore named *nervous asthma.*

The *symptoms* distinguishing true spasmodic asthma are: It commonly comes on in the night time, suddenly and unexpectedly. At first there is a feeling of suffocation. The patient has dyspnœa, with great restlessness and a sense of agony. The difficulty of breathing is great, and it is accompanied with a whizzing, and a dry rattling, metalic, or tinkling cough, and difficult and broken speech. The face is flushed, the eyes protrude, the conjunctiva is injected in plethoric individuals, the pulse is small, irregular, and often intermitting. When the paroxysm is at its highest, the severe coughing often produces vomiting. As soon as the severity of the paroxysm subsides, which it usually does after several hours, there is a remission, until about the same hour of the night when first attacked, when commonly another spasm will occur.

In *diagnosing* asthma it must be seen if there is no organic or other disease of the heart, and this can usually be determined by means of the stethoscope. To distinguish it from night-mare (Incubus,) we need to know that asthma will commence when the patient is awake and in other than the prone position. In night-mare the patient remains upon his back, while, when attacked with asthma, the patient assumes a sitting posture, and reaches forward his neck and head to assist in breathing. It is distinguished from phithisis pulmonalis in its paroxysmal character. As there are no symptoms of inflammation it can always be distinguished from any inflammation of the respiratory organs.

The *causes* of asthma, are sometimes the impure atmosphere of rooms from the want of proper ventilation, cold, moisture, over exertion, suppression of exanthems, excesses in eating or drinking, and irritability of the nerves of respiration. Anything, in short, which will rapidly lessen the electricity or galvanism of the system below its normal standard. As these causes more frequently impress males than females, the disease is much more frequently met with among the former than the latter

Asthma seldom proves fatal, but as it is very difficult of cure its attacks may be repeated during a whole lifetime. Although it baffles the scientific physician, empirics and old women of either sex proclaim it an easy task to entirely eradicate it.

In *treating* asthma we are able to give immediate relief to the spasm, oftentimes, by means of hot foot-baths and plenty of cold water as drink. If the attack is severe, we should also place the hands in hot water made more stimulating by mustard, and apply mustard to the spine. In very severe cases, and especially if the patient be young and plethoric, the tincture of veratrum viride in doses of from five to ten drops three times a day, will be of great service. The simple and especially the etherial tincture of lobelia has by many been considered a specific ever since the Rev Dr. Cutler learned its use from the Penobscot Indians of Maine. Its great utility has been vouched for by Cutler, Barton, Stewart, Reece, Sigmond, Elliotson, and a horde of others since their time, when given in so small doses as not to produce derangement of any of the organs or functions. If given so as to cause either vomiting or purging it retards recovery. I have found it valuable in the following combinations:

℞. Ext. Aconite, ℈j.
Lobelia pulv. ℈ss.
Liquorica pulv. q. s. M.

Form the mass into thirty pills, and give one pill at a dose, several times a day.

℞. Ext. Aconite, ℈j.
Tinct Lobelia,
Water, ā ā fʒj. M.

The dose of this mixture is from five to ten drops, to be repeated several times a day.

℞. Ext. Aconite, grs. vj.
Tinct. Skunk Cabbage,
Tinct. Lobelia, ā ā fʒjss, M.

The dose of this is twenty drops, from three to six times daily.

℞. Tinct. Lobelia,
Acetic Ether, ā ā fʒj. M.

The dose is fifteen drops every half hour. It is very useful to give relief during the spasm.

The Tincture of Pokeroot has been highly praised in asthma. Experience has proved that while it is *not* useful in true asthma or spasmodic asthma, it *is* useful in what has been by some styled asthma by metastasis, and particularly in that caused by rheumatic fever. The same remarks apply to the wine of Colchicum.

I have found the following combination very useful:

℞. Ext. Skunk Cabbage, ʒj.
Ipecac. pulv. ℈ss.
Oil of Peppermint, gtt. v. M.

Of this mass thirty pills should be formed, and one of them taken each morning and evening.

I have also found the Compound Tincture of Lobelia of the Eclectic Dispensatory, in doses of from fifteen to thirty drops every half hour, to give great relief to the patient.

Armstrong lauds Balsam of Copaiba in this disease, Blanchard advises the use of the seed of Delphinium consolida; Brera, Kompfer, Antonucci and Antomarchie, use the Bigonia catalpa; Cappe advises the Nitrate of silver; Cartener, the Oil of Cajeput; Coste, and Villement, the root of the Iris Germanica; Desreulles, the inhalation of

Chlorine gas; Ferrier a combination of Digitalis, and Opium; Floyer, and others, a strong decoction of Coffee; Fothergill, Hops, or better the tincture of Lupuline; J. Frank, the Gum Ammoniacum, and the Golden Sulphuret of Antimony, combined with the Ext. of Dulcamara, or Digitalis, or what would be better, the Ext. of Lobelia, in the form of pills.

I have often found the following of great service.

℞. Elixir Paragoric, f℥vj.
Tinct. Squill,
Etherial Tinct. of Lobelia, ā ā f℥j, M

Of this I give from fifteen to thirty drops at a dose, several times a day.

Graff eulogises a solution of Camphor in Sulphuric Ether, in small but often repeated doses. I have found this mixture of great value in asthma as well as in hypochondriasis, hysteria, etc. Bree speaks highly of the Bicarbonate of Iron, and also of Vinegar; Gaibert used the Extract of Valerian in large doses. Hahnemann, before he promulgated his homœopathic hypothesis, used Nux Vomica, and Veratrum album. Miller used the Extracts of Veratrum album and Nux Vomica dissolved in Laurel water; and my own experience confirms the value of this preparation. Gumprecht speaks highly of the Acetate of Morphia. Harless gave a combination of Ammonia and Benzoic acid as follows:

℞. Ammonia carb., ʒj.
Benzoic Acid, ʒjss.
Water, f℥j. M.

The dose of this is twenty or thiry drops, properly diluted with water.

Kœnigsdoerfer used the trisnitrate of Bismuth; Le Comte, the Extract of Conium; Lenhossek used Blood-root, others have used Benzoic Acid, Extract of Lettuce, the Oil of Hyssup, carbonate of Potassa Tar-water, Iodide of Potassium, a solution of Iodine, Musk, Stramonium, the nitrate of Soda, nitrate of Potassa, etc., etc., etc.

The vast number of agents employed only attests the intractable nature of the disease, and that while many agents will for the time make a favorable impression upon the deranged nerves, nothing as yet is known which will so impress them as to prevent a return of the disease on a renewal of the exciting cause. Care must be taken to learn what is the special exciting causes, and the patient taught how to avoid them.

NATURE, CAUSES, AND CURE OF ASIATIC CHOLERA.

BY PROF. MICHAEL VON VISANIK.

Translated from the German, by T. C. MILLER, M. D.

ALREADY the want of value of any Quarentine regulations to stay the spread of Asiatic Cholera, has been shown, and it is proper now to examine other measures. It was only after all the methods based on the notion that cholera is contagious had over and over again been proven of no avail, that true *prophylactic* measures were adopted.

Quick removal to a high and healthy country, if adopted before the inception of cholera miasm into the system, may protect individuals, but entire people can never leave a place attacked, and ample experience prove that removal *after* the epidemic has broken out in any place is not always sufficient, for many are attacked at a distance after having left an infected district. High elevations, and a pure atmosphere will also tend to preserve the health of the individual, so that an attack of cholera will thus be rendered less grave than one while residing in the impure atmosphere of cities and low regions.

Narrow streets and lanes are apt to be less cleanly than wide ones, and their want of space prevents the free access of sunshine and pure air; and low or damp rooms, and those over-crowded, either in city or country; the contamination of obstructed impure drains or privies, or other causes of hurtful vapors and gases; must all prove causes of danger, and aggravate an attack, and they should be avoided by all who can keep from them, while the utmost efforts must be made to purify them and keep them pure.

It is equally as important for communities and individuals to avoid all unusual bodily or mental labor, fatigue, or anxiety, severe emotions, misery, famine, and particularly FEAR of the disease.

Fear has often caused an outbreak of genuine Asiatic cholera, where not a case had existed before. Some other form of disease has been supposed to be cholera, and a panic of fear has seized upon the people, and thus the epidemic has been ushered in and produced the most direful effects.

In Vienna not long since I made an experiment to try the influence of fear upon a person entirely well. With the entire consent of the proper authority, Dr. F. promised a condemned criminal, of a peculiarly robust and healthy frame and condition of body, an entire remission of the penalty adjudged him for his crime, if he would consent to lodge in a bed in which a person had just died from cholera. He was promised if he was sick that the most careful attention should be given him on the part of the physicians. The felon consented after some hesitation, and the experiment began. After the lapse of only a few hours the symptoms of cholera appeared, and after a little more time the patient was laboring under an attack of genuine cholera of a very severe grade. Through the attention of his physicians, and the strength of his own constitution he recovered. How great was the astonishment of the patient as well as others, when they learned that the bed used *was not* one on which a patient had died of cholera, but a pure one, which had been used to test the power of fear to produce the disease.

A mother came to the second cholera division of the Hospital to see her daughter who was sick of the epidemic. At first she was refused admittance, but after repeated importunities she was allowed to visit her daughter. The haggard appearance of the latter so affected the mother that she was at once seized with cholera and died. The daughter recovered.

Similar instances in large numbers could be narrated, all tending to show the great influence of fear in producing this as well as other diseases, whose power is familiar to the profession.

These well-known facts go to show that *sanative* measures should be adopted *long before* the approach of an epidemic, and should be prosecuted in a way to *quell* rather than arouse the fears of the people. They should be insisted upon by the profession every where and at all times.

The distinction between the cholera-diarrhœa, and that which appears unconnected with this disease, is of practical importance.

It is the unanymous experience of the profession, that diarrhœa precedes the appearance of cholera. This appearance of Diarrhœa in the community, and with individuals, has been considered as the *first stage* of cholera, and therefore requiring the most strict attention.

My experience also corroborates that of others, that cholera-epidemics are usually preceded by Influenza, and Intermittent Fever; and I have been accustomed to attach, particularly to the premonitory diarrhœa, a high pathological importance.

The premonitory diarrhœa, and the diarrhœa which often ushers in an attack of cholera cannot be considered strictly the first stage of the disease, and these can usually be cured by strict attention to diet, avoidance of all pernicious influences, and a simple but proper course of medical treatment. Hence, those who have mistaken this diarrhœa for cholera itself have been led to suppose the treatment adopted for its cure, specific against cholera.

I have always admitted the great pathological value of the preceding diarrhœa in determining the treatment to be adopted for cholera; but I must be allowed to insist, that, however modified by the epidemic influences, there is a wide distinction between it and the *Diarrhœa Cholerica*, or true diarrhœa of cholera.

The distinctive and distinguishing characteristics of these two forms of diarrhœa are plain and easy to discern. In ordinary diarrhœa, the patient complains of gastric or abdominal disturbance, colics, noise or rumbling in the abdomen, and frequent discharges of fæcal and dark-brown masses. In cholera diarrhœa, the discharges come on without pain, and surprise the individual suddenly and without premonitory symptoms, and often without any known cause. The discharges are very frequent, not fæcal, and frequently they contain the serum of the blood and epithelia.

Cholera diarrhœa during the prevalance of the epidemic, can by means of any harmful influence be readily changed to genuine cholera, and hence should be attended to with the utmost vigilence and care, and no delay should be allowed ere the aid of a physician is secured.

The Treatment of common Diarrhœa requires that the individual attacked confine himself to bed, or the recumbent position as much as possible while the disease lasts. That the thirst be appeased, not by cold water, but by mucillaginous drinks, or rice, or barley water, or oatmeal gruel. Fruits or vegetables which may not be readily digested must be avoided, and but little or no medicine will be needed.

If this careful regimen does not subdue the diarrhœa, or if any febrile or inflammatory symptoms are present, an infusion of chamomile or peppermint, or any of the bitters and aromatics will be excellent. If the bowels are much inflamed, more watchfulness will be needed. Applications over the abdomen, injections of marsh mallow, an emulsion of almonds and marsh mallows, and other measures may be demanded.

The symptoms here named and a continued pain in the abdomen, will be sufficient to determine the presence of the common form of diarrhœa, but this may be changed and cholera diarrhœa follow an attack of the common form.

The treatment of Cholera Diarrhœa will demand a very different management. If it assume anything of an inflammatory form applications of a stimulating character must be made to the abdomen, micillaginous drinks, strict dietetic care, confinement to bed, and careful nursing will usually subdue the attack. If the disease does not readily yield I have covered the entire abdomen with cloths wet in hot salt and water, or mustard infusion, which usually relieves the patient.

But when the diarrhœa has appeared *without* any inflammation being present, I have ordered:

℞. Ipecauanha, grs. x.
Water, f℥ vj. M.
form Infusion, and add Tinct. Opium, gtt. x.
Laurel water, fʒj. M.
Give of this a tablespoonful each hour.

In addition, I advise a sinapism to the abdomen, chamomile injections, peppermint tea, warm clothing, and a strict diet. I also order the abdomen to be rubbed often with an ointment made of aromatic and juniper oils added to simple cerate. In the more obstinate forms of cholera-diarrhœa, I have found it necessary to add to the foregoing more opium and a little nux vomica.

During the epidemic of 1855, cholera diarrhœa has been very common, and much more obstinate than during the prevalance of former epidemics, and in many cases, the treatment here detailed would not subdue it. I therefore had recourse to the following compound:

℞. Juniper berries, ℥ss.
Water, q s to make f℥ vj.
Infuse with heat for half an hour, then strain and add:
Columbo, ℈j.
Wine of Opium gtt. xx. M.
Of this give two tablespoonfuls every hour.

If by the use of this remedy the disease did not abate I gave of the same mixture but in larger doses, in the form of injection; and out of an hundred cases attacked ninety-six were completely cured.

In the treatment of Cholera since its first appearance at Jessora, the entire medical profession have united with earnest zeal to discover and use agents which should prove successfully curative. In this endeavor there have been presented as *specifics* both as internal and external agents, enough recipes to fill a large volume.

I do not propose to enumerate all or any considerable part of the remedial measures proposed, but only those which have been found beneficial in different stages and conditions of the disease. In those mild cases caused often by taking cold and appearing by a slight diarrhœa and moderate cramps in the calves of the legs, *Opium* in doses of five drops of the tincture repeated every fifteen minutes, warm cloths over the stomach and bowels, and light friction of the surface with dry flannel will be usually found sufficient to subdue the disease. Some have ordered in similiar cases the Spirit of Mindererus in doses of a teaspoonful every half hour. Others give five drops of Camphor tincture every five minutes.

In those cases where an attack of cholera has been induced through errors in diet, some have had recourse to purgatives to remove the offending ingesta with or without after treatment as already detailed. Others have used an injection of ipecacuanha of the strength of ten grains to two ounces of the infusion, and in doses of a table spoonful once in half an hour or an hour, until the stomach is completely emptied of its contents. Should vomiting of *bile* follow, it may be considered a favorable indication, showing that the liver is acting, and that further progress of cholera has been stayed.

In most cases of cholera, if seen before the disease has developed itself, before vomiting or purging had appeared, and there was only a general feeling of indisposition, with oppression, palpitation of the heart, and dullness of the head, I have used with success, lemonad e and soda.

As soon as other symptoms were present, as nervous irritability, severe pain, etc., I gave at once infusions of melissa, the mints, orange flowers, Hoffmann's anodyne, camphor in small doses, opium, or tincture of castor. The remedial measures I direct in the more severe attacks are also useful in this form of the disease.

The most dangerous of all the symptoms of cholera, are *vomiting*, and *purging*, because they produce rapid exhaustion of the vital powers, and frequently very speedy death.

It follows, therefore, that the people as well as physicians direct their efforts more immediately and mainly to prevent, check, and stop these very exhausting drains. It is to this end that most modes of treating this disease have been directed.

Opium in various forms, has been recommended and used for this purpose; but it has been found on trial that both vomiting and purging would appear and continue until death ensued, in spite of all the power of the drug in any form or dose; and in many instances derangements of the brain, manifesting what are styled typhoid, and apoplectic, and other dangerous complications, were produced by the opium.

The carbonates of the alkalies with vegetable acids in the form of effervescing draughts have not sufficed to check the vomiting or purging. In many cholera hospitals, trials have been made of pyrolignious acid, and although it would suffice in many cases to check these symptoms, it would not answer in others.

The tincture of rhatany, and the trisnitrate of bismuth have been reputed beneficial, but my own experience has not confirmed these favorable reports.

Quinia has by some been considered a specific in cholera and the only remedy on which reliance should be placed; and such consider cholera closely allied in character to malarial fever.

During the first epidemic at Vienna in 1831, at first many considered quinia as the only efficacious agent to stay its ravages. But as we learned more and more of the nature of the disease we became convinced that those cases in which we supposed the disease was subdued by quinia, the attack was simply one of diarrhœa. In genuine cholera cases we became satisfied that quinia possessed but little if any curative power, and could not be relied on.

In cases of genuine Asiatic cholera, many of our physicians have adopted a course of treatment like the following:

The patient is undressed, and wrapped in a woolen blanket and laid in a warm bed, and two persons are ordered to briskly rub the whole surface with dry flannel to remove the clammy sweat and to impart frictional electricity. A blister, or sinapism is placed at the pit of the stomach, and the patient takes punch in balm tea. After the use of the dry flannel, the surface is rubbed with a liniment made as follows:

℞. Olive Oil, fʒjss.
Camphor,
Ammoniacum, āā grs. viij.
Rum,
Laudanum, āā gtt. iv.
Ess. Balm, gtt. x. M.

During these rubbings the patient has given ot him some ipecacuanha in balm tea, and if he be made to vomit that is considered a favorable indication. After vomiting, the patient has ten drops of laudanum in a spoonful of water, and an injection of an aromatic infusion in which is some wine of rhatany.

If there be little or no reaction the patient is made to take twenty or twenty-five grains of powdered capsicum in a small glass of wine. To put a stop to the troublesome hiccup often present, twenty drops of chloroform are given in a little tea. The thirst is quenched by means of small pieces of ice.

This does very well as a *general* guide to treatment, but it must be more or less modified to suit the character of each individual case.

Dr. Sacerdote, as the result of much experience in cholera hospitals, strongly recommends the following formula:

℞. Balm water,
Mint water, āā f℥iij.
Creosote, gtt. xij.
Ether, sulph.,
Syrup, āā f℥j. M.

To be taken in tablespoonful doses. This mixture can be productive of good results in some cases, but must be used with great care.

Chloroform has been used internally and externally even in the asphyctic stage of the disease, and its value has been spoken highly of. I have used it in six cases in my private practice, and succeeded in curing all of them. It must be given suspended in mucillage or syrup.

Lime water also by some has been highly lauded in this disease. I gave it in the following form.

℞. Lime water.
Pure water, āā f℥iij. M.

Of this a tablespoonful is to be given every fifteen minutes. This mode of treatment has been said to be crowned with splendid results both in Vienna and in Italy. The enconiums of others led me to use it in two severe cases to put a stop to the vomiting and purging. But in both cases these symptoms continued unchecked. I then applied sinapisms to the legs and arms, and gave the patients small pieces of ice to swallow, when the vomiting ceased, but the diarrhœa continued and was finally checked by means of laural water, laudanum, or the wine of opium and the extract of columbo, and both the patients recovered.

The history of Asiatic cholera and its treatment show that at all times much reliance has been placed upon *external treatment.*

Rubbing either with the hands of healthy persons or flannels, and flannel gloves and brushes, the application of sinapisms or vesicatories upon the stomach and extremities, ice pounded up, put in a bladder and placed over the region of the stomach, are the simplest and most usual measures resorted to.

To insure reaction wine, spirit, tincture of camphor, and various combinations of stimulants have been proposed. Also a wash composed of what is styled *Theriac*, and other agents. This preparation called *theriac* is made by taking;

Honey, f℥j v.
Opium, grs. j.
Angelica root, grs. vj.
Snake-root, iv.

Valerian,
Squills,
Cinnamon, āā grs. ij.
Cardamon,
Myrrh,
Sulphur, āā gr. j. M.

This is an old preparation, and a wash has been used made with this as follows:

℞. Therica fʒiij.
Nitric Acid, dilut., fʒij.
Oil of Turpentine, f℥ iij.
Honey, f℥j.
Brandy, pure, f℥ vj. M.

A liniment has often been used also composed of the aqua ammonia and oil of turpentine, to which is added some tincture of opium. But the unanymous opinion of those who have had the most experience in the treatment of this disease is, that simple rubbing with the hand or with a warm dry flannel is to be preferred to the use of any liniment or wash. My own experience is that these applications must *do harm* and can be used only with great caution. In most cases I have found that rubbing with flannel, and wrapping up with blankets until the return of warmth and the reappearance of the pulse produced the best results.

In the use of the remedies mentioned and in the order named I have found I could cure all favorable cases, and this is the method pursued by my direction in the second medical division in the hospital at Vienna, and notwithstanding cases were brought to me in a state of asphyxia the favorable results produced by me have led Dr. Percher to give public notice of my success in his valuable and truthful Report.

In the epidemic of 1855 Dr. Melicher treated cholera by means of *movements*, (Gymnastics) suitable diet, the use of disinfectants, and the native oxide of manganese. The oxide of manganese was also used in the Royal Imperial General Hospital, and of twenty-three severe cases in which it was used, fourteen proved fatal. These results are not quite satisfactory, but are sufficiently interesting to be made, public.

Note.—Although the principles and methods of the treatment adopted by Dr. Melicher are of deep interest, want of space compels us to defer publishing them for the present.—Eds.

EXTRACTION OF TEETH.

BY PROF. A. J. HOWE.

In cities and large towns the extraction of teeth is confined—and properly too—to the dental profession, and the physicion and surgeon seldom keep themselves supplied with instruments necessary to perform the operation. The dentists having the business exclusively, fit up their operating cases with every variety of instrument that might possibly be needed in the complications of an extensive business. They expend hundreds of dollars in their "out-fit," and constantly replenish with every valuable accession to their enterprising and progresive science. Were there members of the dental profession in every town and village in the land, an article on the subject of tooth extracting would not be appropriate for a Medical Journal. But it would be suggested that members of the medical fraternity turn over to the dentist such business as legitimately belongs to his profession.

The people in rural districts and small villages are too far removed from a dentist to employ him, except one of the itinerant variety who cares more for dimes than a valuable reputation; consequently the whole dental profession is regarded by them as a superfluity, and one hat could be as easily dispensed with, as the clan of jewel-vending Jews.

It is well for all physicians to understand so much of dental science as to be able to treat successfully odontalgia, and to extract teeth when patients from illness, or distance from a dentist's office, are unable to obtain the services of one of that profession. In order to execute in a workmanlike manner this branch of the dental art, the physician must be supplied with a few instruments, such as a flexible probe for examining carious cavities, and forceps for removing the several teeth, and their fangs.

The cases of odontalgia are too various to demand a single course of treatment. A general neuralgic state of the system may produce such a painful condition of the teeth and jaws as to incite the patient to seek relief in extraction. But no judicious physician will so far yield to the entreaties of a patient as to remove a sound tooth simply because it aches. Pregnant females often suffer from pain in the teeth, and relief would not follow the extraction of every tooth in the jaws. The most common cause of toothache is exposure of the nerve from caries. The nerve is irritated by cold currents of air, acid fluids, and the pressure of food. Teeth affected in this way—if the cavity be not too extensive—should be "filled." Yet there may not be any competent dentist in the vicinity, when it will become necessary to perform the operation of "extraction," or apply some local remedy to allay the pain. Before having recourse to professional advice and aid, patients commonly resort to the local use of camphor, paragoric, laudanum, and other popular remedies. The physician when consulted, for a time may continue the use of local anodynes, but permanent relief not following such treatment, he generally resorts to extracting instruments. It may be better, however, in cases where the patient can at some subsequent period obtain the services of a dentist to have a filling inserted, to destroy the nerve. This may be done in two principal ways. Firstly by forcing to the bottom of the fang, along the canal which contains the nerve and bloodvessels distributed to the pulp of the tooth, a flexible steel wire the size of a bristle, and withdrawing it with a twisting motion. This operation removes the nerve, and of course the source of irritation and pain. The introduction of the wire is attended with keen, momentary suffering, and few patients knowing the nature of the operation can calmly submit to it. The pain, however, is not so severe and lasting as that attending extraction. Nearly all dentists of the present day extract the nerve and force the filling to the bottom of the fang. And when well done, it is the most efficient method of precluding any further trouble on the part of that tooth.

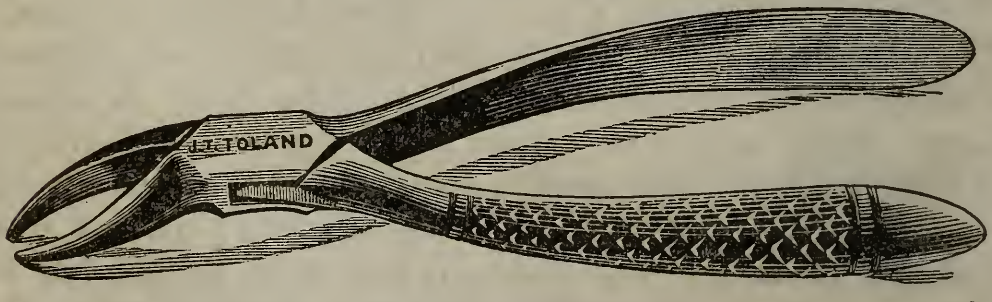
The other method of destroying the nerve consists in the direct application to the pulp, of a preparation of arsenic. The formula as used by most dentists for this purpose, is as follows:

℞. Arsenious acid. grs. iv.
Morphiæ Sulph., grs. ij.
Creosote, q. s. Misce, fiat massa seu pasta.

This preparation used in minute quantities, sufficient only to destroy the vitality of the nerve and bloodvessels of the cavity, is safe and efficient. Before using it the carious cavity should be well cleansed with a probe that the paste may be placed in immediate contact with the pulp or nerve. A dossil of lint the size of a pin's head when compressed, smeared with the paste, is then to be pressed into the cavity with a probe, and confined there with a layer of wax. This should be kept in place for thirty six hours, when it is to be removed to prevent the arsenic from penetrating beyond the extremity of the fang, and irritating the external or peridental membrane of the tooth within the alveoli. Immediate relief generally follows the application of the paste, and the nerve is so thoroughly destroyed, that it rarely serves as a medium of sensibility. If the peridental covering be not affected by the arsenic of the paste, the tooth will retain its vitality and to a great extent be preserved from discoloration and decay. The tooth can be filled at any time subsequently, yet the sooner the better. If the fang be not filled, there is constant danger of inflammation and suppuration about its extremity which commonly can not be relieved without a removal of the entire tooth. The pain that often attends a carious tooth, is quite as excruciating as any mortals have to endure. And extraction is accompanied with as keen pangs as the amputation of a limb. But as the operation is brief, and the relief so certain few persons will endure toothache a great length of time, without attempting to rally courage enough to meet the extracting instruments.

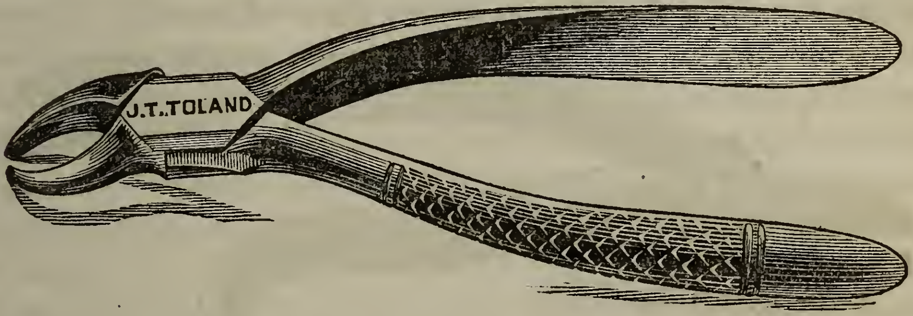
The object of this paper is more to demonstrate the best means of extracting teeth, and the most limited number of instruments that can be employed and yet be sufficient, than to detail the various means of arresting toothache by other agencies. And for this purpose several diagrams have been gotten up to illustrate the very few forceps that will answer to extract the different teeth and fangs. A fewer number could not furnish the variety of form that is actually demanded for the extraction of the several teeth without danger of breaking, and other accidents ; and a greater number of forceps would require more expense than a physician is ordinarily willing to incur for this branch of his professional business. Were a practical dentist asked to select from a stock of dental goods the smallest number of forceps a physician would require in the general practice of tooth extracting, he certainly would not name less than four pairs ; and even that small number would not be suggested without hesitation and forethought.

This pair of forceps is needed to extract fangs anywhere in the jaws, and may serve to remove the lower incisors, and the smallest teeth of children. This instrument should be made of good stock, and so tempered as not to bend or break under the force ordinarily applied to it. The inner surface of the beaks are made slightly concave to clasp the convexity of a fang or the neck of a small tooth, and slender enough to easily slide between the gum and tooth, even down to the alveolar borders. No gum lancet need be used to cut around a tooth before it be

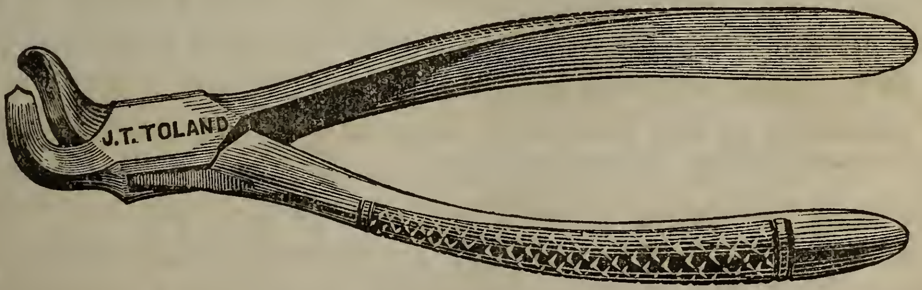


extracted, as the gums do not ordinarily adhere to the teeth. To use a lancet for incising a gum before applying a forcep is a barbarous practice; and it requires about as much resolution on the part of a patient to have the gums cut, as it does to meet the forceps.

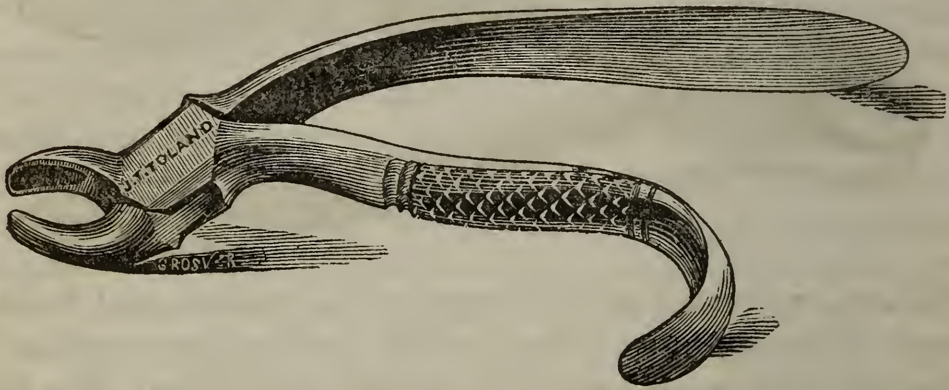
When fangs are to be extracted, it may be well sometimes to cut away the gums, that the forcep blades may grasp the thin alveolar, borders which are to be cut through with the forceps before the fang is reached. The lesion done to the alveoli by such an operation, is not serious in its results. The injury to the bone and soft tissues in such cases granulates and cicatrizes about the same time, and the process of recovery is not much prolonged by the complication.



This cut represents a pair of forceps, whose strength, and beaks are adapted to the extraction of the superior incisors, the conspidate and bicuspidate teeth, as well as the larger teeth of children. The variety of teeth to be removed by this instrument renders it impossible for the blades to fit accurately all of them. Consequently they are to be used with more care than is ordinarily exercised in the application of forceps. The breaking of a tooth in an attempt at extraction, is particularly to be avoided. If the inside of the beaks be too concave the instruments will break off the neck of the tooth; and if they be too straight, they will crush the crown of a frail one. These accidents often occur from badly fitting instruments.



The instrument here figured is adapted to the extraction of the inferior molars, including the wisdom teeth of the lower jaw. In place of this pair, a practical dentist is accustomed to use at least three pairs. One instrument, however, fashioned like the one above represented, in good hands, will successfully remove all the molars of the inferior maxilla. To use the instrument advantageously the operator should stand on the right of the patient, behind his arm, and facing his side. The patient's head thrown back to expose to view the teeth, is to be held firmly with the left *arm*, while the left *hand* steadies the jaw to prevent fracture or dislocation. It is essential that the operator stand upon a stool unless the patient be placed on a low seat. Without this precaution many teeth will be broken that might be entirely removed by the first attempt. The blades of the forceps must be well arched on the inside, or the crowns of decayed teeth will be crumbled by their pressure. In the successful construction of this, as well as other dental instruments, the cutler should have been a practical dentist.



None of the instruments previously mentioned in this article, are fit to extract upper molars, consequently this one remains to be described. It is a more powerful forcep than either of the others. It has a curve in it near the joint to let it back into the mouth, and at the same time to give the operator control over these triple fanged, firmly set teeth. That the hand may exert more power upon the handles of the this forcep, a curve is made in one of them to wind around the little finger. An instrument like the one in the diagram is well adapted to the extraction of the superior molars, and the upper wisdom teeth. For the successful use of these forceps, the patient should be placed on a low seat, or the operator should be elevated. It needs a firm grasp to prevent the beaks of the instrument from slipping on the neck of the tooth. To cant the tooth powerfully to one side and then the other, is necessary, to remove it easily and with as little pain as possible. But to repeat the cantings rapidly by rotating the hand is not good practice. Each lateral movement of the tooth pinches the peridental membrane, and elicits as much pain as a cant heavy enough to loosen a fang.

With four pairs of forceps similar to those represented by the diagrams, a physician may extract any tooth that demands the operation.

These four pairs constituting what is called the *physician's set*, were devised by us, and are sold by J. T. Toland, of this city. *

Dr. Coates, of Virginia, has recently secured a patent for a forcep having shifting beaks, which has some points to recommend it. Two pairs of handles, and five pairs of beaks constitute a sufficient assortment for the extraction of all the teeth except the incisors. By the rotary character of the beaks, they will accommodate themselves to the peculiar form of the teeth. The set is sold for twenty dollars.

At the present day scarcely anything need be said concerning the *turnkey* which for centuries served as the only tooth extracting instrument. Almost every adult can vividly call to mind, without the assistance of a diagram, the outline of this old fashioned tormentor. It has been suggested that it was first introduced into practice by a cruelly ingenious Inquisitor ; and that it caused many a heretic to recant before it was used in a more humane service. A few antiquated Doctors still use this venerable machine, and have become so attached to its monstrous *claws*, as to favor their seizure now and then upon an unsophisticated victim.

When one side of a tooth has completely decayed, the turnkey can be used to *turn* it out of place by fixing upon the sound side. And for that purpose the instrument finds a place in almost every dentist's operating case. Yet it can be dispensed with, even under such circumstances, its place being taken by more dextrously fashioned instruments.

It is rational to suppose that the forceps were used before the introduction of the turnkey. In the temple of Apollo which was built centuries before the Christian era, has been found a leaden forcep, which was undoubtedly the model of an instrument used in precisely the same manner that extracting forceps now are. The ancient model is uncouth but in all likelihood, was suggested by the early use of the fingers in the removal of teeth that barely adhered to the gums. It required a modern mechanic to construct forceps, whose form and temper should be adapted to the extraction of every variety of teeth. Much credit is due the enlightened profession that has carried within the space of twenty-five or thirty years, to the perfection of a science an art that was recently among the rudest. It only remains for the more philanthropic in the profession to diffuse such knowledge among the people, as will enable them to better preserve *from the need* of the operating dentist, those highly useful and ornamental organs, the teeth.

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* The "Physician's set," is sold for six and nine dollars, according to the quality of the finishing polish,

GOLDEN SULPHIDE OF ANTIMONY.

BY LEWIS E. MILLER, M. D.

This preparation of Antimony is so often mistaken, or rather other preparations are so often mistaken for it, that the greatest caution is requisite to insure that the article produced is genuine.

I am well aware that many are opposed to the administration of the antimonial preparations, but I have found by observation and experience that the Golden Sulphide of Antimony is a very valuable medicine in many of the diseases of the respiratory organs, and in my opinion second to none other. While I am opposed to the administration of the other antimonial preparations, I have proved this during seven years experience in its use to be harmless in small doses, and one of extreme value. As I claim to be an *independent* man, I take for my motto: "Examine all, and choose the best."

The golden sulphuret of Antimony, or rather the golden *sulphide* of Antimony, is a light powder of a fine orange color, without taste or smell, insoluble in cold pure water, made soluble by the application of gentle heat in alkalies, and partly soluble in hydrochloric and nitro-hydrochloric acid.

If pure, water will not deprive it of any saline elements; concentrated hydrochloric acid dissolves it slowly by uniting with the sulphur. It is perfectly soluble in fifty times its weight of aqua ammonia by gentle heat if it is very finely triturated and kept excluded from the air.

If it remains of a brown-red color similar to Kirmes mineral it contains too little sulphur. If it remains of a yellowish white powder which burns with a flame of sulphur, the proportion of sulphur is too great.

The golden sulphide of antimony is a powerful and quick stimulant to the mucous membrane of the respiratory system, and acts as a diaphoretic as well as an expectorant, but is less energetic than the Kermes. It is sometimes given in conjunction with calomel, but decomposition must follow their admixture. Many physicians do not know of the chemial reactions which take place in their unscientific combinations of other agents as well as these, and hence many errors are committed.

I use this preparation of antimony in very small doses either in conjunction with other remedies or triturated with sugar of milk in catarrhal fevers, measels, bronchitis, pneumonia, tracheitis, laryngitis, cough, blennorrhœa, chronic catarrh, and in derangements of the liver and spleen, as well as in dropsy, miasmatic diseases, rheumatic and gouty affections, pertussis, humid asthma and in spasmodic croup.

I give it in doses of from one-half to two grains three or four times daily, in the form of powders, pills, mixtures, etc.

In coughs, I have found the following formula of excellent service.

℞ Golden Sulph. Antim., gr. ¼.
Nitrate of Soda, grs. ij.
Magnesia, calcined, grs. iv. M.

Divide the mixture into twelve parts, and for a child two years old give one part once in two or three hours.

In the second stage of pneumonia, and as a means of promoting expectoration, I have used:

℞. Golden Sulph. Antim., gr. j.
Camphor, pulv., grs. ij.
Benzoic Acid, grs. vj.
Sugar of Milk, grs. x. M.

Of this make six papers, and give the contents of one every thirty to ninety minutes. This Compound Powder of the Golden Sulphuide is very valuable in pneumonia of weak persons, drunkards, etc., when the expectoration has suddenly ceased, producing great anxiety, heavy breathing and a small pulse, and other indications of debility or paralysis of the lungs with approaching dissolution. With this preparation the life of such can often be saved.

A combination of the golden sulphide of antimony with the extract of hyosciamus, and the extract of liquorice, or with the addition of ipecacuanha, I have found very useful in pneumonia.

I like the following:

℞. Golden Sulph. Antim., grs. viij.
Opium, grs. jv.
Camphor, grs. xxiv.
Nitrate of Soda, ʒj M.

Put these into eight powders, and give three or four a day, in bronchitis. Or.

℞. Golden Sulph. Antim.,
Oxide of Zinc, āā grs. iij.
Musk, grs. jx.
Sugar, grs. xxx. M.

Pulverize, and divide into six equal parts. One of these given every two hours is very good in whooping cough. In chronic gout, I order:

℞ Golden Sulph. Antim.,
Extract of Aconite, āā grs. ij.
Sugar of Milk, grs. vj. M.

This is to be pulverised and divided into eight parts, and the contents of one paper given morning and evening. A solution, or rather emulsion of this agent with tragacanth, and other agents, has been used in various conditions of disease of the lungs and mucous membrane of the air passages.

Prof. T. G. Rademacher spoke of the use of this agent in the following terms: "The golden Sulphuret of Antimony is one of the remedies which I neglected in the beginning of my practice, because it was administered in vain by other practitioners who ought to understand the matter better than I. It was in the fifth or sixth year of my practice that I was called to treat a woman from Holland, who was troubled with a violent cough. I gave her opium, mercury, digitalis and other medicines; but nothing did good. She was half bed-ridden when she came to me, but became quite so under my treatment, with a great increase in the violence of the cough. I then thought of the Golden Sulphuret of Antimony, and gave it with the root of elecampane and Florentine iris, in doses of half a grain four times a day, when I observed the patient improving daily and rapidly, so that by its continued use this woman whom I had feared must die of consumption was restored to perfect health.

I was so well pleased with the combination that I have used it unchanged for many years. My prescription was as follows:

℞. Inula root, grs. x.
Iris, Florentine, grs. x.
Golden Sulph. Antim, grs. x. M.

To be divided into four papers and one given once in six hours.

I have often given it when there was, and when there was not fever or pain, when the breathing was easy or difficult, and the relief to the cough and other chest difficulties was immediate and great. It would be erronious to suppose that *all* coughs would be relieved by this agent.

"In regard to quantity, I give from four to ten grains in twenty-four hours. One grain at a dose four times daily is my usual prescription. Ten grains a day is an unusual amount."

This agent will not cure all catarrhal coughs; but much will depend on the epidemic condition of the atmosphere and patients, as well as the disease in other parts of the system which often produce coughs and other derangements of the chest.

Rademacher observed that this preparation disturbs the livers of those whose hepatic functions are easily deranged, and hence with such should be administered with great caution and circumspection.

ASTHMA.

BY J. A. HENNING, M. D.

Asthma is characterized by difficulty of respiration, generally occurring in paroxysms, which take place usually at night. In the paroxysm, the breathing is laborious, wheezing, with a sense of stricture of the entire chest, a short, dry cough, the face becomes flushed and bloated ; frequently these symptoms are so severe as to threaten immediate dissolution by suffocation. There are two species of this disease ; the humid, and the dry or spasmodic. In the former the paryoxism is gradual and generally protracted, some constriction of the chest, respiration somewhat laborious, the cough severe and troublesome, the expectoration commences early, soon becomes copious, and then affords considerable relief. In the spasmodic species the paroxysm is usually sudden, violent, and of short duration ; the constriction of the chest is very considerable, and of a spasmodic nature, the cough slight, and the expectoration scanty and only appearing towards the close of the paroxysm.

The spasmodic form of asthma is comparatively of rare occurrence, probably not one case occurring for eighty cases of the humid asthma. Asthmatic paroxysms are generally preceded by langor, flatulency, lassitude, drowsiness, pain in the head, loss of appetite, nausea, disturbed rest, constipation of bowels, and pale urine. The paroxysm gen erally makes its appearance in the evening after exhibiting some of the above premonitory symptoms during the day, and it frequently passes off with the night, when the patient feels much better though not entirely relieved. Towards evening these symptoms increase in violence again until they become as distressing as on the preceeding evening. After several nights passed in this disagreeable manner the paroxysms become more moderate, particularly when there is considerable expectoration from the lungs. Finally these severe symptoms will leave the patient, who in some cases is left in the enjoyment of good health. However it is often the case that patients suffering from this disease acutely cannot lie down in bed ; and many sleep in a chair for years for fear of suffocation. When the predisposition to asthma is strong it may be brought on at any time by various causes, but it will occur more particularly in the fall, winter and spring. With some patients it seems to occur periodically. Relapses in this disease are attended with an increase of the symptoms, and the vigor of the constitution is impaired, until finally a chronic weakness is induced.

Asthma is an affection of the bronchial vessels, lungs, and heart.

In the paroxysms sometimes the lungs cannot be sufficiently dilated with air, the passage of blood through the pulmonary vessels is not free, hence these blood vessels occasionally rupture and a considerable amount of blood is spit up. At this stage of the disease the prognosis is considered unfavorable. Corvisart, Resten, and others, allege that this malady depends on a morbid or diseased alteration in the respiratory organs and circulatory system, by which congestion of blood in the lungs is produced. Resten states in substance that in many cases post-mortem examinations were made immediately after death, and that in many of them, alterations of the heart and arteries were found combined with congestive states of the lungs. Some ascribe it to ossification of the costal cartilages, coronary arteries, and cardiac valves.

Occasionally we see cases in which the humid and spasmodic asthma are united and both exist together in the same patient. When this is the case the paroxysms are generally harder, and will be of longer duration. Asthma may manifest itself at any age. Children of a full or plethoric habit are subject to it, but sometimes it does not manifest itself till after the prime of life. Asthma is a nervous disease, and such diseases are very numerous, and my opinion is that they are in a measure confined to those possessed of an imperfect cerebral organization; some portions of the encephalon is either in excess or deficient.

Cases of Angina Pectoris are recorded in which symptoms of asthma first appear and then disappeared in the course of the disease. Upon this point Dr. Kneeland says: "The difference between angina and asthma may be explained by the different functions of the filaments of sensation and motion in the par vagum. In asthma the dyspnœa is more characteristic than pain; every muscular power is brought into action to introduce air into the lungs; the diaphragm and pectorals contract convulsively; the desire for air is extreme, and the patient seems continually on the point of suffocation. During the paroxysms there is more or less absence of the respiratory sounds, from the difficulty the air finds in entering the pulmonary vessels; hence the violent and noisy laryngeal respirations. When the fit ceases there is copious expectoration, with mucous *rales* and cough. The muscular fibres of the bronchi and their ramifictions are animated by the spinal accessory nerve; the dyspnœa of asthma depends on the spasmodic contraction of these fibres, the partial obliteration of the air-passages requiring violent respiratory efforts to secure the necessary introduction of air; in this constriction the larynx is involved, as is evinced by the whistling of the inspirations. The non-introduction of air into the pulmonary vesicles accounts also for the diminution or even absence of the respiratory murmur."

Prognosis. When this disease is uncomplicated it should be considered curable with the appropriate remedies and following physiological laws; but when it is complicated with organic derangment of the heart or lungs, it will generally sooner or later prove fatal. Under such circumstances the treatment can only be palliative.

Treatment. During a paroxysm of Asthma the patient must be placed in an erect position, and where there is a free accession of pure air. Antispasmodics and relevants must be given. The following compound is an excellent one, and fulfils the indications well:

℞. Tinct. Lobelia, f℥j.
" Gelseminum, fʒij.
" Symplocarpus, f℥jss. M.

Give one teaspoonful every hour, or oftener if it is necessary until nausea is produced, or even gentle vomiting. In the mean time apply the following liniment over the throat, neck, chest, and vertebral column, which the practitioner will find an excellent auxiliary in arresting the paroxysm:

℞. Oil of Lobelia, fʒij.
Oil of Stillingia, f℥j.
Alcohol, (98 per cent.) f℥iv. M.

Apply as often as it is necessary. After the paroxysm is arrested, the following pill may be taken with the view of breaking up the disease:

℞. Sanguinaria, grs. x.
Gelseminum, " xij.
Lobelia, " xv.
Ext. Taraxicum q. s. M.

Form eighteen pills. Take one pill four or five times a day. If there is much cough present, take of syrup of Squills, Ipecac., Senega, and Tinct. Lobelia, āā ʒj. Mix, and give it in suitable doses three or four times per day. If the bowels and liver are torpid I generally prescribe the Compound Leptandrin Pill, one or two every night until the bowels are more regular and a good action of the liver is established. More recently I have used, in a few cases the Comp. Solution of Iodine in doses from six to eight drops in some sweetened water, three or four times per day, and gradually increased to fifteen or twenty drops, with good results.

DIOSCORINE.

"I WOULD ask whether the efficacy of DIOSCORINE in Bilious Colic has been proved.

I gave it sometime since to a patient who was considered by a very respectable practitioner, as well as myself, to be laboring under bilious colic. I gave about two grains every twenty minutes, for some time, and it appeared to nauseate the patient somewhat, but did not give the slightest relief to the disease.

It has been said to be a specific in bilious colic, as much so as quinia is in intermittents, and I wish to know if the experience of the profession sustains this idea."

REMARKS.—To ascertain if an agent be useful in any disease, it is necessary to determine *what* the disease is, at least so far as to be sure that the term conveys the same idea to all who use it.

Unfortunately for the reputation of Dioscorine or any other reputed specific for the cure of *bilious colic*, the profession have been by no means agreed as to what diseased condition should be known by that name.

Dunglison in his Lexicon defines this disease to be, "colic, occasioned by an accumulation of bile in the intestines or in its own passages." Hooper says: "when the pain is accompanied with a vomiting of bile, or with obstinate costiveness, it is called *bilious colic*." Prof King in his Family Physician says; "bilious colic appears to be a spasmodic or neuralgic affection of the muscular coat of the bowels, which may be brought on by irritating substances in the bowels, exposure to cold, vitiated bile, etc., etc."

In his Practice of Medicine, Dr. Dunglison says; "The disease consists essentially in great impressibility of the nerves of the digestive tube, under which a neuropathic condition is often induced; this extends to the liver, which under the excitement increases the secretion of bile."

I have consulted quite a number of physicians in regard to what *they* understood by the term "bilious colic," and in no two instances have I recieved the same answer. One has said, that where a stoppage of the bile-duct, by concretions or otherwise, produced severe abdominal pains, and, the absorption of the bile into the lymphatics caused a jaundice of the system, *that* was bilious colic.

Another stated that where there was spasmodic closure of the sphincter ani with pain in the rectum and colon of a spasmodic character accompanied with constipation, he considered that bilious colic.

Still another said in bilious colic there was paralysis and distension of the annular muscles of the colon, the same as in colic caused by lead poisoning, and the liver being affected with a paralysis and torpidity similar to the colon, and not secreting bile, leaves the fœces as well as the skin to take on a peculiar leaden-clay color from the absence of bile.

In regard to the action of Dioscorea villosa on the system, while it has for half a century been mentioned as useful in bilious colic, but little light has been thrown upon its therapeutic action. In the last edition of Prof. Kost's work, he says it was introduced to the profession by H. Howard, and is anodyne, antispasmodic, and diaphoretic. On the contrary in Howard's work published nearly thirty years ago, *he* says he is indebted to Dr. J. L. Riddell, author of *Synop. Flora West. States*, who "has *not* informed us upon what principle it is supposed to afford relief in bilious colic, whether as an anodyne, cathartic or some other." As Dr. Kost made use of Howard's old wood cuts to illustrate his book, it is to be supposed he had read the credit given to Dr. Riddell.

In the Western Medical Reformer for March, 1837, it is said: "The knowledge of its medical virtues was obtained from a celebrated physician of New Jersey by the name of Bone, who used it for many years as a secret remedy for bilious colic, and was eminently successful in its treatment." In that article, it is said to possess "strong antispasmodic and anodyne, as well as some diaphoretic and *anti-emetic* properties."

In King's Dispensatory, it is simply called "Antispasmodic." Prof. T. J. Wright in an article published in the American Medical Journal, said of the infusion of the root, as prepared by Dr. Bone: "In many cases of bilious colic it affords relief and restores the sufferer, as by magic, to health and quietude." He calles it antispasmodic.

In noticing this root, the Am. Journal of Pharmacy for April 1836, quotes from Dr. Riddell's paper, and from Dr. Neville of Ohio, and says, that Dr. Neville placed much reliance on the tincture as an expectorant and diaphoretic, and in large doses as an emetic. The emetic power of this plant has not always been noticed, and as has been shown, some have supposed it to have properties antagonistic to emetic ones and hence have called it an anti-emetic.

But while each writer has often simply copied the idea advanced by his predecessor with an amusing design of exactitude, hence we should by no means refuse it a renewed and more thorough investigation.

If we know but little in regard to the root of a reliable nature, we know far less in regard to the powder which is said to be the active principle of the plant.

Nearly all who have used the Wild Yam for the treatment of bilious colic have relied on an infusion of the root in warm water, which of course would contain those principles which were soluble in warm water; but the powder called *Dioscorine* is made by steeping the root in alcohol or dilute alcohol, and contains elements soluble in it, while those soluble in water and not in alcohol are *not* obtained. Consequently the powder called Dioscorine does not resemble in all regards the infusion which has been reputed useful in bilious colic.

Different manufacturers make the powder in different ways, and as all or nearly all of them *throw away* those portions soluble in water while they retain the chlorophyle, vegetable extractive, and other valueless portions, we need not wonder that it disappoints such physicians as place reliance upon it. But too little is known of the condition of the system called by the name of *bilious colic*, as well as the special influences exerted on it by the root of the wild yam to allow us to express any opinion as to its value.

SKIN DISEASE.

BY D. L. OVERHOLSER, M. D.

A FORM of skin disease for which I find no name, has been very prevalent in different sections of the country. The eruption is vesicular. The skin presents an inflamed surface with very small vesicles, and when these are destroyed by scratching (and they generally are,) scabs form, which present the appearance following a scratch on the healthy skin. The disease is contagious, and is named according to its locality. For instance, on the prairies of Illinois it is called the "Prairie Itch," here in the Wabash valley it is called "Wabash Itch," etc. I believe it appears on all parts, but mostly on the arms and the upper portion of the body.

I do not think it agrees with the symptoms described in the books as itch, especially as regards locality; and if the above meagre description will enable you to do so, I would be pleased to have you give me a name for it.

I might have mentioned another symptom, but it is probably common to most if not all skin diseases characterized by itching; namely, that the itching is much more troublesome when the patient gets warm, and especially after going to bed.

I find the ointment of White Hellebore a good agent for its cure.

EDITORIAL DEPARTMENT.

OSMOSIS.

What is known as the Osmotic Force has for a considerable period of time attracted the attention of chemists, as one of the most interesting of the forces of nature, and one which is often productive of wonderful changes in the Organic Kingdom, but especially in the Animal Division of that kingdom; which changes have been variously explained by writers, yet it is only quite recently that Physiologists and Physicians have with any clearness perceived the influence this wonderful force has upon the human body in health and disease, and upon the action of medicine administered for the cure of disease.

Prof. Graham, in his Bakerian lecture said that: "*Osmosis* is the name applied to the power by which liquids are impelled through moist membranes." We shall see that the manifestation of this power is not confined to liquids, but that gases are infused by it also.

The osmotic power is shown where a solution of a saline is placed on one side of a membrane, and water upon the other side; and the activity with which this force is manifested, or the *power* by which fluids are impelled through membrane is shown by a beautiful contrivance of Dutrochet called the *Osmometer.*

When a saline solution is confined within a membrane, according to Prof. Graham, the saline particles do not go out of the membranous enclosure into surrounding pure water by an osmotic power, but entirely by *diffusion*, the outward movement being confined to the fluid saline particles, while the water which holds the saline in solution remains entirely passive. Hence the saline passes *out* comparatively with great slowness.

But the flow *inwards* from the water to the solution has been properly denominated *a current*, as it affects large masses of fluids, but always having a definite relation to the amount of the saline in solution, or the specific gravity of the fluid which is on the other side of it.

Osmosis has been spoken of as having reference to an intervening *membranous* septum and the circulation of fluids through the membrane, and hence it has been called *membranous circulation*; but Prof. Graham and others have applied the same term to the circulation of a similar character through a porous mineral septum, as porous earthern ware. That an osmotic force is exerted through porous mineral, as well as dead animal membrane, proves that *vitality* does not originate membranous circulation although it does doubtless modify it somewhat.

Porret has spoken of an electrical osmosis, which has been explained more fully and clearly by Weidermann, and as there is always a varying but sensible amount of electricity in the living animal tissue, it may be that thus vitality influences this power.

Acids and alkalies, when in solution, are chemically combined with a considerable amount of water, and are thus *hydrated.* This is shown to be a fact as far as sulphuric acid is concerned, for when not more than a fiftieth part of water is added to the acid a very sensible amount of heat is evolved by their chemical combination. This hydration of acids or alkalies when in solution is apt to be overlooked by physicians, but by some chemists as much is supposed to depend on the results of this combination and that the porous and membranous septa are the means of bringing out and rendering visible, both in electrical and ordinary osmose, the movements of the liquid which attends the chemical and mechanical changes or decompositions and combinations that are necessary to the process of hydration.

The chemical character of the osmotic change, and the fact that it will occur through porous mineral septa as well as through dead animal membrane, may perhaps lead some to suppose that however curious, it can have no special claims upon the practitioner of medicine. But we should remember that the human body is a chemical laboratory, and that strictly chemical changes are each moment taking place in each minute cellule of the solids and each group of atoms of the fluids. While the chemical forces are modified and controlled in some instances by the vital force, they are aided in their action in others; and in those cases where they are controlled they by no means are destroyed, but are ever exerting an influence. All parts of the living organism is in a state of incessant and continuous change, of decomposition and recomposition, of destruction and renewal. Hence this very decomposition, when it occurs in a living membrane, by setting in action the osmotic power, may be the very means to perfect the action of the organ, or of the body, and thus perfect the processes of decomposition or of recomposition.

The extent or amount of this osmotic force is very great, equal in many instances to the pressure of many atmospheres, and that whenever a fluid or gas is in contact with a moist membrane, whether the membrane be endowed with vitality or is dead. If the conditions which favor this membranous circulation are present the fluid or gas will circulate through the membrane with great mechanical power. In this regard, the membrane may be organic or inorganic, alive or dead;

the osmotic force is manifested alike through all conditions of the septum.

From these facts we may infer, *a priori*, that this great force is always present, and is the cause of many of the phenomena of life, whether those phenomena are normal or abnormal.

The law of this force as applied to the veins, arteries, or lymphatics, has been stated by Dr. Chambers thus:

"1. If a moist membrane be interposed between two watery solutions of different densities, two currents will run through the membrane, one from the denser to the rarer liquid and one from the rarer to the denser, *and the later the strongest*, *cœteris paribus*, *in proportion to its density*.

2. The current is much increased in the direction of a liquid set in motion.

3. The current is increased in the direction from an acid to an alkaline fluid.

4. The activity of the osmosis increased with the temperature."

These conditions being present, the presence of osmotic force acting according to these laws, will account for the *absorption* which takes place into those vessels, of fluids by which they may be surrounded, for there are *four* conditions present in a very marked degree, which favor that absorption. These are: the density of the fluids within the vessels, as compaired with those without them; the motion of those fluids, which in some of the vessels is very rapid; the alkalinity of the contained fluids; and the positive electrical conditions of those fluids, as compared with those of the surrounding tissue. That the warmth of animal life also aids in osmosis we do know, and that many other physical conditions may do so is more than probable, but not rendered absolutely certain, from a want of fullness and accuracy of observation on this subject.

The influence of the power of these combined conditions to cause fluids to pass through the coats of vessels into their cavites, either from the alimentary canal or from the surrounding tissues and cavities, or in other words, the influence of these combined conditions to aid in *absorption* into the blood-vessels from the stomach, the bowels, from cavities and adjacent structures, can be perceived almost at a glance; and as the fluids within the vessels are of greater specific gravity than the surrounding fluid, or that external to the vessels, absorption by osmosis must take place unless prevented by causes which have not as yet been considered.

By the osmotic action, absorption of liquid or dissolved food or other substances takes place from the mouth, the stomach, the intestines, the skin, and from any surface that is moist and to which such substances may be applied. But according to the observations of Matteucci and Cima, the different membranes of the body allow of this membranous circulation *easier* in one direction than in the other, and hence they conclude:

"1st. The membrane interposed between two liquids is very actively concerned, *according to its nature*, in the intensity and direction of the osmotic current.

2ndly. There is in general, for each membrane, a certain direction in which the osmotic force is exerted most intensely.

3rdly. The direction of the greatest intensity of osmosis through *skins* is usually from the internal to the external surface, and as far as their experiments extended the skin of the frog was the only exception to this rule.

4thly. The direction of the current through stomachs and bladders, varies with different liquids much more than through skins."

Experiments made by many physiologists, prove not only that the blood-vessels may be greatly distended by the osmotic current flowing into them, but that the same law holds true in regard to the *corpuscles* of the blood itself which are sometimes distended even to bursting by a too full and too rapid flow of liquids through their membranous walls.

Pereira, in his work on Materia Medica has clearly shown the influence of this power, and hence he deduced the rule: "*Many medicines produce physical effects on the body by their influence over the phenomena of endosmose and exosmose*," and he instances such as cause an outflow of the serum of the blood, as the most of our so called *hydragogue cathartics*, as salines, when administered in solutions of such strength as to be of greater specific gravity than the blood: Such as cause an influx of the solution, as nearly all solutions of a less specific gravity than the fluids in the vessels: And such substances as render the membrane unfit or incapable of allowing the action of the osmotic force; as sulphureted hydrogen, tobacco and the hydrochlorate of morphia.

Pereira truly says: "The endosmotic influence of medicines may be exercised when they are applied to the body and before they become absorbed, as well as after their absorption into the blood. In the first case, it is exerted through the coats of the vessels on the blood; in the second case, it is exercised either through the membrane of the blood-corpuscles or the fluid contained within them, or through the coats of the capillaries or the parenchyma of organs."

As both absorption and nutrition are among the phenomena of osmosis of fluids, it must be obvious that the influence of medicines to govern and control this osmotic action, and thereby to modify the functions of the organism, has very much to do with the action of such as are used as remedial agents. But this may be referred to again.

Osmosis as observed in fluids, although not yet thoroughly understood, has been subjected to closer and more often repeated experiments and investigations than *osmosis of gases*, but enough even of its action with gases is already known to teach us that we shall be amply repaid in further investigating the subject. *Vapors* as far as osmosis is concerned may be coupled with gases, and will be spoken of under the same general term.

Fownes is very careful to point out the distinction between *diffusion* and osmotic circulation of gases, which latter he says is due to a temporary liquefaction or solution of the vapor or gas in the moisture of the membrane, and "is an effect completely different from diffusion." The diffusive power of carbonic acid gas in the atmospheric air is very slight, and hence it falls to the bottom of pits and caves, and is often to be found in the lower strata of the atmosphere of churches, school, and sleeping rooms, while the upper strata are comparatively free from it. But it passes through a wet bladder with great freedom. The power of osmosis in this gas is clearly shown in the process of respiration. The air inhaled is not brought directly in contact with the blood, but as long as the mucous membrane of the lungs is kept moist, the passage of carbonic acid gas outward and of oxygen gas inward, goes on with wonderful facility. But if the mucous membrane from any cause becomes dry, then the disengagement of carbonic acid gas is hindered, and the blood retains enough of this sedative to make its flow through the system sluggishly, and to cause very serious disease and even death, similar to the death produced by the same gas in a tight room, or in too great quantities.

That the action of many of our cathartic medicines can be explained on the principle that they cause osmosis, has been fully proved by G. O. Rees, Pereira, Headland, Pouiseuille, and others, and it is more than probable that one reason why many of the semi-fluids and the fluids of comparatively great specific gravity, pass into the intestinal tube, on their way out of the system, rather than through any other surface, may be in accordance with a similar law. Gases escape into the air through the lungs and the skin, into a thin gaseous medium; fluids pass through the kidneys into the bladder, and through the skin, ordinarily only when it is surrounded with a watery vapor, steam, or moist clothing, although the more tenuous portions of the blood may also appear as perspiration under the pressure within the cutaneous capillary vessels caused by active exercise, or when the osmosis is quickened by a high degree of heat.

We find that those medicines which are easily changed into gases, as ammonia, the aromatic volatile principle of many plants, sulphur, and others, ordinarily escape from the system through the lungs or the skin, stimulating those tissues to an active performance of their functions. Those medicines which are dissolved readily, and which dissolve substances in the system, but which do not readily change to a gas escape mainly into the bladder, or in the gall-bladder.

But those medicines which assume only a semi-fluid form, escape through the intestines and increase their activity. These facts are observed when *onions* have been eaten as food in considerable quantities. The more volatile gas escapes soon through the lungs, imparting the onion odor to the breath. After a little, a less volatile odorous vapor passes through the skin. After a longer period the watery portion of the cormus is presented in the urine, and still later a semi-fluid portion passes into the intestines. All these substances still retain some of the characteristics of the food eaten.

Many of the changes in the system are already known to be owing to the osmotic force, and others are *supposed* to owe their action to the same cause; as the passage of the blood from the mother to the fœtus, the diffusion of the bile throughout the system in jaundice, where it has been manufactured by the liver but hindered from passing into the intestines, etc., etc.; and the more observant among therapeutists, physiologists, and chemists, are anticipating that the domain of science must extend by a fuller and more perfect knowledge in regard to osmosis even beyend the anticipations of the more sanguine investigators.

THE EPIDEMIC IN THE EAST.

In reply to a letter of inquiry sent to a physician in southern central New York, asking information in regard to an Epidemic at the present raging there, our correspondent says:

"In regard to the *new epidemic* as the physicians term it, I have had no experience in, as it has not extended to our town, but I have personally consulted those who have treated it.

It usually manifests itself with chills, nausea and vomiting, and severe pain in the base of the brain and is not unfrequently followed by convulsions. It is also accompanied by echymoses and spots upon the surface. Some state that they are taken with a pain in the limbs which then goes to the head. Two have been taken, one in the finger, the other in the toe. It terminates in coma, and in from ten to thirty hours. Several have died in fourteen hours after the first outset of the disease.

The treatment as you might expect was commenced by bleeding, purging, counter-irritants, etc., which resulted in almost certain death. But few if any have survived the disease when so managed. Recently they have abandoned this treatment and use stimulants, tonics, etc., under which several have recovered; but they say that they still continue to die, at which you will not wonder when I state that they have ever used alcoholic preparations as *stimulants*, which are more properly sedatives in the quantities administered. This is a point where they all fail, taking alcohol to be a stimulant instead of what it properly is."

BOOK NOTICES.

Principles and Practices of Surgery. By James Syme, F. R. S. E., of Edinburgh. Edited by Robert S. Newton, M. D.. Professor of Surgery in the Eclectic Medical Institute, etc., etc., Cincinnati, O., Moore, Wilstach, Keys & Co., 1858.

Professor Syme, the author of the above work, from his situation has obtained considerable notoriety; but he has contributed very little of real value to the profession. His pet amputation at the ankle-joint has sunk into merited disrepute, and is barely tolerable as modified by Quain and others. And his early objections to resection of the knee-joint, are shown to be groundless by the successful practice of Fergusson, Heyfelder, Jones, Butcher, Carnochan, and other eminent surgeons of Europe and America. The most recent and valuable part of Mr. Syme's contributions to surgery are scattered through the English Medical Journals and do not appear in his Surgical work, which was issued several years ago. As a text book for the student, or guide to the general practitioner of medicine and surgery, it is incomparably inferior to the cotemporary productions of Liston, Miller, Erichsen, and others.

The great number of clinical cases reported in the work renders it tedious in the extreme. Few care to read from three to four pages concerning the appetite, pulse, and evacuations from day to day, of John Wood, Elizabeth Johnston, or John Malloch, although the dry details be interspersed with American notes, like the following; (See 318th page) "[Had this quina (?) or some other permanent tonic been relied on, the patient would have fared better.—R. S. N.] "

The work contains nothing concerning the modern plan of reducing dislocated bones,—nothing concerning the use of woven wire splints in the treatment of fractures and diseased joints. In fact substantially all the valuable improvements made within the last fifteen or twenty years in a notoriously progressive science do not find a place in this work. Yet it is "dedicated to the Eclectic Medical Profession of America, as a feeble (!) attempt to *improve* the science and art of Surgery."

Let the Eclectic be wary, or he will be deceived, and not possess the "great improvements" heralded in prefaces, and boughten puffs of local newspapers. Some progressive allopathist—for there are such—may step in and with gentle manipulation, reduce a dislocated hip that for hours has been fruitlessly operated upon with straps, hooks, pulleys and other implements of by-gone days recommended by Syme and Newton. Progression does not always belong to the most pretending.

A year ago there was a demand, as there now is, for an Eclectic Surgery. Hill's rehash of Gibson and Fergusson, is out of print, and something must be done towards furnishing a substitute. The plan being concocted by one incapable of writing good English, he concluded to *edit* some foreign work, no matter whose, provided it was not already on American shelves. Accordingly a collection of monographs and lengthy reports of clinical cases, dignified as a treatise on the Principles and Practice of Surgery, was selected ; and Prof. R. S. Newton, who is modestly mentioned in the American edition as being "*at the very head of the Eclectic School of Medicine in the United States*." graciously consented to eclecticize it. Eclectics may now read an allopathic work without danger of being misled ; and allopathists may in turn easily come in possession of the "great improvements," and "simplified operations" of one said to be "at the head, etc." ! !

Those well acquainted with the editor of Syme's Surgery, best understand his proclivity for dangerously wounding "the King's English." To call attention to all the instances of solecism, errors in orthography, and unclassifiable blunders found in his "notes," would require more space than the editor has occupied in reproducing the book. Such expressions as "toning up the system" frequently occur, and indicate the style of the writer.

A specimen of the editor's clearness may be noticed on the 120th page: "All the tissues of our bodies depend upon the material *floating in the plasma*, for their growth." And on the 124th page: "With the

Sulphate of Zinc I *removed* every vestige of the gland, and *sloughed it off* by elm poultices."

A dozen pages of the work are devoted to the exposition of one side of a case of alleged mal-practice which from its nature cannot interest any one but the parties implicated in the suit. As there is so little said in the work concerning fractures, the space seemingly might have been more profitably employed.

A "note" from the 396th page will be quoted entire as it is brief. It needs no comment but to Italicize certain words: "Rachitis will seldom or never occur if proper attention *is* paid to the general health of the *child*. Of course, if the *child is* the offspring of diseased parents, it will be liable to the disease; yet if proper care *is* bestowed on the general health of the *child*, *it will be seldom seen in our Western States.*"

One other quotation will be inserted as a specimen of one of the "great improvements" introduced by the editor, in the treatment of ankylosis. From the surprising effect the remedy has upon firmly united bones it deserves to "stand at the very head," of "bone liniments." Here it is, (445th page:) "The most efficient remedy for rendering joints supple, is a liniment composed of oil capsicum, olive oil, and oil of turpentine. It is surprising what an effect this combination has on anchylosed joints." Undoubtedly many of the virtues of the remedy depend upon the *peculiar* combination used by the author, but as the proportions are not given no one need expect the surprising effects alluded to, unless the relative quantities of each oil be accidentally discovered by experiment.

The book is enlarged somewhat with an Appendix, which seems to be an abridgement of Keith & Co's. "Positive Medical Agents." The inappropriateness of like appendages in Medical and Surgical works is apparent to every one. The index to the work is neither full nor correct. The diagrams are few, and poorly executed. There is a striking resemblance between most of them and those that were used in illustrating Hill's Surgery. The well known publishers have enhanced the book with good type, paper, and binding.

Researches on Primary Pathology, and the Origin of Epidemics; in two volumes. By M. L. Knapp M. D., etc., etc., etc. Vol. XI., Philadelphia, 1858.

In February 1857, the College Journal had occasion to notice the second part of the first volume of these *Researches*, and in that article Dr. Knapp was spoken of as "one of those rare men who are not satisfied to rest their faith in regard to matters on the simple fact that the public mind is fixed. He wishes to *know* and understand for himself, and get at the truth of the matter irrespective of *authority.* Hence he has adopted opinions, and has collected a vast array of observations by a large number of men in different countries, in support of his opinion."

The idea which pervades this work can as well be presented in the words of its author. He says: "This work claims to unfold the Primary Pathology of Disease. It claims to set forth the *vera causa* of not only Epidemic Cholera, but of every other epidemic form of disease, yea, of all sporadic disease. It contains New Doctrines then, or embodies what is believed to be a substantial progress made in medical science; a philosophy that explains, on inductive principles, the origin and laws of epidemics—of all forms of disease, indeed, giving the *rationale* thereof."

There is ever in the minds of most men a tendency to make known and establish truths in science, the key by which phenomena, even beyond the apparent range of those truths, shall be explained. In the science of life this tendency is constantly manifested; and if one idea, or set of ideas can be proved well founded, others *assumed* to rest on the same basis, are readily admitted. Inasmuch as *heat* accompanies animal life, and an absence of it, or coldness accompanies death, the aphorism which Samuel Thomson learned from his predecessors and repeated as the foundation of his Medical and Therapeutical philosophy, that: "Heat *is* life, and cold is death," has been admitted by very many, whose reason if allowed, would have taught them otherwise. The same causes have led people to have faith in many other absurd and false notions.

The nature of the essential cause or causes of Epidemics has, from the obscurity as well as the importance of the matter, engaged the attention of the philosophical and the unphilosophical minds in the profession at all times; and an almost endless variety of notions have from time to time been promulgated, as the true solution of this vexed question.

Spirits, vapors, humors, and a great variety of invisible potencies have been summoned by the fertile fancies of the inventors of hypotheses; and more recently, since the microscope has revealed to us almost a world full of minute animal and vegetable existencies, the *Animalcular*, and *Cryptogamous* origin of epidemic and other diseases has been ably advocated.

As the drop of water, and the speck of cheese when explored by the magnifying power of the microscope were discovered to be filled with animal life, the conclusion has been very unphilosophically jumped at that animalcules were the cause of all epidemic and sporadic diseases, and the *Itch* the origin of all diseases.

Many years ago, Sir Gilbert Blane, noting the spread of infections and contagious diseases, remarked: "The infection may be aptly compared to the seeds of vegetables or the eggs of animals, which require a nice concurrence of certain degrees of heat, moisture, rest, nutriment, etc., to animate them," and the idea was taken in its most limited sense, and the hypothesis of the *vegetable* origin of disease obtained, and has been earnestly maintained by many.

The researches of modern Chemists have shown that certain matters are taken into the system of the animal for its nourishment and growth, and that, if not properly prepared or used in the nutrition and growth it acts as a foreign hurtful matter, causing embarrasment in the performance of the functions of the organs, and producing disease and perhaps death by its presence. Hence the position taken by the author in this work, that, "IMPAIRMENT of nutritive life, is the foundation of the pestilence that walketh in darkness."

It is to this *impairment* that Dr. Knapp has attached the name SCORBUTIS, thus making use of the old word to convey his new idea, and in this regard we think he has committed a serious error and one which will tend to impair the value of his work, as well as to restrict its sale.

In regard to the correctness of the hypothesis of Dr. Knapp, as well as others, entertaining *exclusive* notions, we think they *may* be correct in part, while they *must* be erronious as attempting to explain *all* the origins or causes of disease. The action of the Imponderables, formerly known under the name of Spirits although not understood in all cases, is already well enough known to show us they have great power in causing the presence and nature of many forms of disease. By the word *Humors*, the older writers understood the fluids whether red or otherwise, and we know through the researches of Simon, Bird, Budd, Jones, Rokitansky, Lehmann, Robin, and others, that the fluids of the body are liable to undergo chemical changes, which changes are not caused by the presence of either vegetable or animal microscopic growths.

Mc Culloch considered microscopic vegetables as the probable cause of many epidemics; while Prof. Mitchell was so well convinced of this Cryptogamous origin, that in 1847 he published six Lectures he had delivered before the students of the Jefferson Medical College in support and elucidation of that opinion.

That *defective nutriment*, or as Dr. Knapp has expressed it "*impairment* of nutritive life" has much to do with producing many derangements and diseases, is undoubtedly true, but if "an animal is an apparatus of combustion, burns carbon, hydrogen, ammonia; excretes carbonic acid, water, salts, azote; consumes oxygen, azotized, fatty, amylaceous and saccharine matter, gum, etc.; produces heat, electricity; restores the elements to the air and earth; transforms organic into inorganic matter;" etc., etc., then we may properly infer, even if we have not yet proved, that *many* causes may produce disease or derangement of this wonderful organism.

Too much, or too little of the various imponderables, as heat, electricity, or galvanism may be present. The vessels may contain an excessive, or deficient quantity of fluids. There may be present animalcula, or fungi; or the system may suffer from the presence of unassimilated or improper articles of ingesta; or a diminished or increased activity of the various processes of alimentation; by a *surfeit* as it were, or a starvation.

In short all the various ideas advanced in these hypotheses may in part be founded in truth, but when presented as explaining the cause of "every form of epidemic, yea, of all sporadic disease," it *must* be they are untruthful, and *not* helpful, but rather hurtful to progress in medical science.

Biography of Elisha Kent Kane. By William Elder. Philadelphia, Childs and Peterson, 1858.

With the above modest title, the publishers have presented to the world the biography of one of the formost men and physicians of the present or of the past ages, and written by one of the purest and best writers the profession has ever had within its ranks.

In writing this life of Dr. Kane, Dr. Elder has performed a labor of love, and in a most loving and faithful manner; and the book will be read both by the present and future generations, and will always act as a strong incentive to a high and noble life; and teach both the young and those more matured, truer and better ideas of children and humanity than have obtained with many. Although not a medical book no medical man will regret its purchase or the time devoted to its careful perusal. The life and character of Dr. Kane are too well known to make an analysis necessary.

The Physicians Hand Book of Practice and Memoranda, for 1858; by W. Elmer, M. D., and Levi Reubin, M. D. Second Edition, Stringer & Townsend, New York, 1858.

This very useful pocket manual, which we noticed in our February number, is meeting with an unprecedented sale. Notwithstanding similar works are before the profession, a second edition of this has been demanded, and is now ready to supply the demand. We do not wonder at this, because it contains so much practical and interesting matter in so small space. It is a complete "multum in parvo." In addition to the space allowed for memoranda of visits, patients, etc., there is given a complete but brief classification of diseases, their symptoms, and remedies, a list of medicines, together with poisons and their antidotes, Dr. Marshall Hall's ready method, etc., etc. We can not see how any practicing physician could well be without a work so very useful.

MISCELLANY.

EPIDEMICS.

We have reports that the country is more than usually scourged with epidemics at the present time.

Scarlet Fever prevails in very many places, particularly in the north and west.

Typhoid Fever has even caused the suspension of a College in Virginia.

Small Pox prevails more than usual in many sections; as also does Measles.

In the southern part of New York, a disease similar to the "Brain Fever" which we noticed in the College Journal a year since, but which is now spoken of as the "Spotted Fever," has proved very fatal, particularly with those who had been bled as a part of the treatment.

FATAL HEMORRHAGE FROM THE UMBILICUS.

Dr. R. Wells, of Ky, recently had a case come under his observation in which on the ninth day after birth a violent hemorrhage occurred from the umbilicus during a fit of coughing and vomiting. And so exhausting was its effect that the child died in six or eight hours afterwards. In nearly all cases of *secondary hemorrhage* a large amount of blood is lost before medical aid can be commanded; hence the fatality of such difficulties. In this case the cord was tied and cut in the common way, and nothing unusual was observed until the paroxysm of coughing and vomiting. The remains of the cord shrunk and was cast off in the ordinary manner; but slight ulceration prevented the formation of a cicatrix and favored the escape of blood from the arteries that originally carried it to the placenta. The case was an uncommon one, and few of the kind are on record. It is well known that the young of all the lower placental animals have no provision against hemorrhage from the umbilical arteries upon the separation of the cord but the protection afforded by the laceration of the funis, and the natural retraction and contraction of divided arterial trunks. Yet these young animals seldom loose much blood from the navel vessels. Cases of fatal hemorrhage have been observed in them, but always in connection with ulceration and sloughing of the umbilicus.

MEETING OF THE ECLECTIC MEDICAL ASSOCIATION OF INDIANA.

Notice is hereby given to the members of the Indiana Eclectic Medical Association, and all others who may feel interested in the cause of Medical Reform, that the Annual meeting of the Association, will be held at Indianapolis on the 15th day of May, 1858, commencing at 2 o'clock, P. M. A general attendance is most earnestly solicited as business of importance will come before the meeting. Let all come prepared to spend several days as we wish to take council of each other in regard to the best means of advancing the cause of our reform. Wright's Hall, immediately opposite Sittles Hotel in the Eastern part of the City and on Washington St., has been procured for the occasion. By order of Executive Committee.

O. H. Kendrick, R. Sect.

Indianapolis March, 28th 1858.

☞Please publish in your Journal, the call for our Annual Meeting in Indiana, and oblige the friends of medical reform. Yours, etc.,

O. H. Kendrick.

Females in the Dental Profession.—Mr. D. W. Dobson of New York is making efforts to induce women to enter the dental profession, with fair hopes of success.

MARRIED.

On the 28th of Febuary 1858, M. F. Tate, M. D., of Albia, Iowa, to Miss Eliza S. daughter of Gen, Wm. Carhartt of Farmington, Iowa.

THE

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ORIGINAL CONTRIBUTIONS.

CARCINOMA UTERI, AND SCIRRHUS UTERI.

BY LEWIS E. MILLER, M. D.

Although Scirrhus and Carcinoma, or Cancer have been known to physicians from the earliest periods, yet even now but a very indifferent knowledge is had of their nature, and we find them explained in very different terms. And when we compare the description as given by Galen with the ideas of the most able physicians of the present day, we find that our knowledge of these diseases is not much more extensive than was his.

Authors are at present divided into two classes in their views of these diseases; one contends that carcinoma is the result of a chronic inflammation, or at least is in the commencement a *local* disease, which as it continues produces a general dyscrasia; while others assert their belief in the existence of a cancer diathesis, which developes itself sooner or later in one or several organs.

Among the supporters of the first view are found the names of Broussais, Boullaud, Richerand, Peyrithe, Robert, Pouteau; while as advocates of the second hypothesis may be seen besides the old Greek physicians, such names as Bayle, Cayol, Delpech, Teallier, C. Schrader and others.

Maunoir asserted there exists a peculiar poison that is capable of developing cancer, similar to that of Gonorrhœa or Small-pox, and to disprove this, Robert, Tayet, Le Noble, Durand and Bitt, suffered themselves to be vaccinated with the filthy fluid from a cancerous growth. Tauchou made similar vaccinations on animals and on incurable women in Salpetriere, without being able to produce the disease in those operated on. C. Wenzell regards carcinoma as the suppuration of an indurated part occasioned by or following inflammation. Velpeau who inclines to the hypothesis that this is a humoral disease,—is of the opinion that the material for the developement of cancer exists in the blood.

All of the foregoing hypotheses are open to many objections, and none can be taken as affording a true exposition of the nature or cause of this disease.

Mad. Bovin and A. Dugas make a distinction between cancer, scirrhosus, ulcerosus, fungosus and hæmatodes. Columbat describes a cancer, scirrhosus, ulcerosus, fungosus hæmatodes and medullaris, and also a cancer mixtus, as when several of these pathological forms are met with together. Cruveilhier believes all organic transformations and degenerations as exclusively the result of the deposition of morbid products in the areolar elements or tissues of organs, and maintains that the tissues proper of organs are incapable of undergoing any organic lesions, except that of hypertrophy and atrophy, and that the seat of scirrhus uterinus is in the veins.

Scirrhus and the succeeding carcinoma may occur at any point of life after puberty, although it is of rare occurrence it is met with in the younger years. Its most frequent attacks are after the period of child-bearing, either before or soon after the cessation of the menses. J. H. Wigand reports a case of scirrhus uterinus in a girl only fourteen years of age. Statistics, as is seen by the investigations of Saucerotte, prove that organic diseases of the uterus are much more frequent between the ages of thirty and forty, at which time it is well known that mortality of the female sex is much the greatest.

It is probable that scirrhus of the uterus never dates its first formation later than the "critical period of life," and in those cases where it exists after this time its formation can be traced back into the earlier periods. In support of this view we have the researches of Duparcgue, who among forty women, between the ages of forty and fifty, affected with carcinoma of the uterus, found only five in whom the disease commenced at an advanced age, while in thirty-three it had existed long before the "turn of life" and in many cases it could be traced to early miscarriages. Virgins and unmarried women are very seldom attacked with carcinoma of the uterus, and when it does occur there will generally be found a hereditary cause for it. It may occur in women who have led a vicious life by indulging too frequently in sexual intercourse, or suffering many abortions, which does not however preclude the existence of a previously diseased condition.

It is well known that the disposition to carcinoma is hereditary, as can be readily proven by a large number of cases; and lately this view has heen advanced by A. Cooper, T. V. Ruet, Charles Bell, and others. The following may be enumerated as among the causes of this disease: the too early excitation of the sexual instinct, disturbance of menstruation, menstrual colic, sterility, dislocations of the uterus, abuse of emmenagogues and drastic purgatives, disproportion between the male and female organs, onanism, abortions, unskilful aid in delivery, pressure, contusion, rude separation of the placenta, sudden suppression of menorrhagia, anxiety and the depressing passions, bad food, exhausting occupations, and unhealthy localities.

Carcinoma uteri, may be either hard or fungus, and is sometimes developed as a tumor growing out of the mouth of the uterus which gradually increases and finally ulcerates, discharging a fœtid, filthy fluid. The pain is excessive, and often there is hemorrhage, destruction of the uterus, and death. At the commencement of this disease the patient feels only a slight painful sensation in the centre of the pelvis, which is increased by coition, a discharge of urine, or an evacuation of the bowels, or at the return of the menstrual period. The pain gradually increases until it become persevering, stinging, burning, lancinating, and it appears to pass out from one point. This is often accompanied by a paralysis of one or both thighs, a scirrhus induration of the breasts, irregularity in the menses with the menstrual fluid fœtid and bad colored.

Cardialgia, nausea, vomiting, disturbed sleep, loss of strength, cachectic appearance, hysteria and dropsy, are among the many unpleasant symptoms that are found in connection with this fearful and fatal disease. A safe diagnosis can not be made without a vaginal speculum, and very often we find this disease confounded with metritis granulosa, and ulcerosa, which accompany leucorrhœa and other chronic diseases of the uterus. Touching and examination with the speculum discovers to the operator a conspicuous knotty swelling on the neck and mouth of the womb that bleeds on touching, and is extremly sensitive.

It is truly remarkable that so grave a disease should not preclude the possibility of conception, but several cases are on record in some of which the child was delivered by the unaided natural efforts. Of the seven cases reported by Mad. Lachapelle, four of the mothers recovered after the delivery,—and C. V. Sieboldt, De Outrepont, Lanbreis, Boer, Martin and others have reported similar cases.

I have called this disease a fatal one, and so it always is when it becomes once fully developed, yet great value is to be placed upon correct medication even in incurable diseases, for then the true physician can give satisfaction to himself and ease and comfort to his patient in the judicious use of those agents which the researches of the past have placed in his hands, in alleviating the pains of the victim, and smoothing the downward road to death.

The first effort should be to render the progress of the first stage as slow, and its transmutation into cancer as distant as possible. Scirrhus gives rise to but few symptoms of a disagreeable character, but cancer entails greater suffering than almost any other disease to which the female is liable, and invariably terminates fatally. So long therefore as the complaint can be kept in the first stage, the life of the patient is in no immediate danger and her comforts but slightly interfered with. In the attainment of this object, every possible cause of the disease must be removed, and any habit which might prove injurious must be abstained from. To correct the constitution or improve the general health, nothing is of more value than a judicious regulation of the diet, and this must be attended to in every case of scirrhus. The bowels may be moved by mild purgatives and kept in a soluble condition either by a proper diet or a use of laxatives. If sour eructations, or acidity of the stomach be present, they may be corrected by the alkaline carbonates in connection with the occasional use of hip baths of warm water and salt, or vapor baths which are highly recommended by Sarchez.

The use of purgatives will be necessary for several reasons; to overcome the mechanical pressure of the scirrhus on the rectum, to promote a free circulation in the intestines, or to counteract the constipation which often obtains from the too frequent use of narcotics. Columbat recommends an excellent preparation for this purpose; the decoction of the pulp of prunes and tamarinds, and oily enemata. Many of the best authors advise the use of saline purgatives, as sulphate of magnesia. Pearson recommends the phosphate of soda which being tasteless is very agreeable to take. Dewees advocates the use of castor oil and rhubarb, or a combination of rhubarb and aloes. I object decidedly to the use of drastic purgatives, and to obviate the difficulty of the above milder remedies failing to produce their effect as they would from long continued administration, I advise a frequent change from one to another as the judgment of the physician may dictate. To the above may be added an infusion of senna made into an emulsion with oil of sweet almonds and gum Arabic which will be found an energetic but mild laxative.

Iodine is recommended very highly in this disease both internally and externally. Rush reports a case of the disappearance of a painful induration of the uterus in three weeks by the internal use of iodine and an injection of a solution iodide of potassium. Montgomery, Zimmerman, Mearer, Ashwell, and others report very favorably of its use. Ellitson recommends its use in large doses as, ʒj to ʒij, combined with ext. conii, grs. x. to xx. Having seen much injury arise from the administration of such large doses, I usually prescribe the following:

℞. Iod. Potassium, ʒiij.
Aqua Destillatæ, f℥ vj. M.

Dose a tablespoonful three or four times a day, and three times a day, give from five to ten drops of tincture of iodine, or:

℞. Iodid. Potassium, ʒj.
Syr. Sarsaparilla, f℥ vj. M.

Dose a tablespoonful. I have also found the iodide of iron very useful.

Muriate of ammonia and animal charcoal are spoken of as valuable, but I have had no experience in their use.

Sedatives are also indicated in this disease, and I would recommend such as conium, hyosciamus, belladonna, aconite, etc., in appropriate doses. Opium is one of the best, if not *the best* palliative remedy in such cases, but because of its constipating effects the acetate of morphia is to be preferred.

Calendula officinalis is spoken of by Westring as a specific for scirrhus and cancer. He uses it as follows:

℞. Ext. Calendulæ, ʒivss.
Pulv. flos. " ʒjss. M.

and make into pills of two grains each. Dose five, morning and evening. Ruet gave it in combination with carbonate of iron with much success.

Muriate of gold applied externally will be found of much service and it has been used by Westring, Chrestien and Wendt, internally in the following formula:

℞. Muriate of Gold, grs. vj.
Ext. Conium, ʒj. M.

Make into pills of one grain each. Dose one, morning and evening.

As external applications, conium, hyosciamus, belladonna, tannic-acid, iodine, decoction of oakbark, alum, nitrate of silver, chloride of zinc, chloride of lime, dilute acetic, phosphoric, or nitric acid and creosote have been recommended and are more or less beneficial. A warm vaginal cataplasm containing some narcotic will often be found very agreeable. As pressure of the intestines upon the uterus increase the pains, it will be well for the patient to keep in a horizontal position as much as possible. At the most we can expect but a temporary relief from the remedies we have recommended, and sooner or latter we must expect to see our patient go down to the grave. In those cases where medicine has so signally failed, the aid of surgery has been called and no remedy has been deemed too desperate, that could afford even the slightest chance of recovery, and incisions, cauterizations, excisions, or complete extirpation of the uterus have been proposed, but the latter operation has been condemned by the best surgeons, as Velpeau, Gendrin and Dieffenbach.

DO CEREBRAL DEFORMITIES ARTIFICIALLY PRODUCED, EVER BECOME NATURAL OR TRANSMISSABLE TO PROGENY?

BY PROF. WM. BYRD POWELL.

In my present hemiplegic condition, time occasionally hangs heavily upon me, and to reduce its gravitating influence, I sometimes scribble a little, and so as I eschew study I generally select an interesting subject from among those with which I am familiar. And though the subject may be familiar to me, it may not be so to very many of your readers. When therefore it happens that the subject is one of this kind, and scribbling suits the purpose for which it was intended, then you will oblige by allowing it a place in your valuable Journal.

The question that heads this article is the subject about which I now propose to scribble, and if I mistake not, is new to your readers generally. As very valuable illustrations of important physiological truths are sometimes met with amongst the inferior animals I would be exceedingly obliged to any of your readers or correspondents if they will report such as they may know, more especially if calculated to shed light on the question before us.

Ethnological physiologists so far as I have become informed with reference to their opinions, are on the negative side of this question with the exception of the author, who would rather be alone with TRUTH than in company with all the distinguished of his race with an error; and upon this question he feels very sure that he has the truth, and that he can very nearly if not entirely remove all doubt that may exist in the minds of others.

However improbable the affirmative of this question may, *a priori*, appear to many, it must be conceded, however great this improbability, that there is ample room for the possibility of the affirmative being the fact. And I esteem it to be unwise for any class of philosophers to flout a question because they cannot conceive of the possibility of its occurrence, for the most gifted may be incapable of conceiving the full extent of nature's usages in many instances, and the question before us may be one of them.

Dr. Spurzheim at one time was of the opinion that if an infant's head should be deformed by artificial means, the normal form would be reproduced before the arrival of adult age. In this opinion the doctor was in error, for I have now the crania of octogenarian Indians whose heads had been deformed in infancy and yet retained the deformity through life. I suppose the doctor abandoned this opinion before his death, as I do not find it in his last writings.

The learned and talented authors of "Types of mankind" flout the affirmative of the question that is now the subject of my inquiry.

Some thirty-five or forty years since, in reading a fragment of an old history of our Indian tribes, I learned that the Choctaw Indians had at some former period been distinguished as the "flat-heads." And when some twenty-five years since I visited these Indians, I met in their territory Prof. J. R. Buchanan, and as soon as we met he informed me that he had been amongst the Choctaws, and then added that he had made a great discovery. I expressed a desire to be informed of the nature of it. He answered: "I have discovered that Gall and Spurzheim are fundamentally wrong." I responded, "that is certainly a great discovery." On expressing a desire to be informed of the data on which he founded his discovery. His answer in substance was about this: "The Choctaws have some large cerebral developements, but they do not manifest them in the manner taught us by Gall and Spurzheim." I then informed him that I had also been making observations upon the Choctaws, and that they were in harmony with his own; but still I was not prepared to join him in his final conclusion, and asked him what would become of his discovery if the Choctaw head should prove to be a deformity. "What is it!" he exclaimed. I answered: "I do not know but I will, before I conclude that you are entitled to the credit of the discovery which you say you have made. Thus far I have found that Gall and Spurzheim have faithfully represented their teacher NATURE."

Before my interview with Prof. Buchanan, I had seen many of the Choctaws, all of them had much the same cranial preculiarities. The frontal portion of their heads has so much the form which the bilious encephalic constitution produces that when I first entered among them I felt constrained to ask myself this question. Are all of this people bilious encephalics? But further and more particular observation brought me to a strong suspicion that their cranial pecliarities had probably resulted from cerebral deformity; a confirmation of the truth of the information I had previously received from the old fragment of history. I inquired of the old men of the nation concerning the form of the heads of their people, but could obtain no information concerning it; nor could I learn anything of a traditionary character in relation to it. At length when almost despairing of success I met with a Rev. Mr. Cushman, an octogenarian missionary who had labored with this people ever since his early manhood. In the course of some desultory conversation with him I named to him my perplexity. After a moment's pause he said: "These Indians have not practiced deforming the heads of their children since my acquaintance with them, which has now been about sixty years. Nevertheless Sir, I think that I can give you some information that may aid in your researches. I had an old friend who was for many years a chief among these people and such was the moral rectitude of his life that he was universally esteemed and respected by all who knew him. Some years before his death he became a member of my church. He died about twenty or twenty-five years ago. Many years before his death he and I were talking about the customs of Indians generally, when he informed me that an Indian tribe once lived in this country (East Miss.) who were called Shockshumas, and they were very predatory and troublesome to their neighbors; and that finally the Choctaws resolved to be troubled with them no longer but to destroy them; and accordingly did kill all the men. The women they captured and made wives of. Those Shockshumas, continued the old chief, changed the form of their children's heads by compression. The Shockshuma women after they became Choctaw wives pursued upon the heads of their infant children the custom of their ancestors. My mother, he added was a Shockshuma, and she changed the form of my head. As soon as he had thus communicated to me the fact, he placed my hand on his head, seemingly for the purpose of placing his veracity beyond doubt—and then continued: "The Choctaws as a people, in a short time became to fancy this Shockshuma form of head, and adopted it so generally that at this time it is not probable that one of our people can be found, the form of whose head has not been changed. This form of head after having been artificially produced became natural to the Choctaws, so that for many years no mother has artificially produced it. Since I received this information from the old chief I have observed the form of the Choctaw heads in my intercourse with them, and to the extent of my observation the artificial form is universal among them. There may be some difference among them in degree, but in kind they are all the same. A few years before his death he and I were walking over some waste lands when he called my attention to an old beach-tree, saying; under that tree are the bones of the last of the Shockshuma war chiefs.''

At this point I interrupted my Missionary friend by asking him whether there would be any objection to my having his skull: He answered, "None sir, I will show you the place." "Where was the old Choctaw chief buried?" I inquired. In answer he exclaimed: "Oh! you cannot get his head, for his children, grandchildren, and great-grandchildren are living all around his grave." Perceiving the old gentleman's feelings to be a little tender upon this topic, I said no more about it. We walked to his residence and dined. After dinner he went with me to the grave of the Shockshuma war chief, and on the way he procured me some help and I obtained the cranium of this chief. The base of it generally had returned to its mother earth, but all that portion of it which the deformity involved was sufficiently sound for my purpose.

About the close of day I mounted my horse and after a silent and skulking ride of ten miles, and two hours hard labor, I had the skull of the old Choctaw chief. It was sound, having been buried in sandy soil.

I had now two crania which had been artificially deformed, and also about thirty of those which had not been, but upon which this artificial deformity had been entailed. Between the two former and the latter I perceived that in kind the deformity was the same, and with a few of the latter the deformity was equal in degree to that of the former. I will simply add, that this investigation forced me to conclude that the affirmative of the question is the fact; and my readers must have followed me to the same conclusion to the extent of their reliance on my veracity; and I beg leave to refer those who may doubt it to the Choctaw tribe of Indians west of the State of Arkansas. They will be received kindly. The Choctaws are an amiable people.

Cerebral deformities from mechanical causes, are much more numerous than have been suspected. The Osage Indians have generally, indeed universally, to the best of my observation, a cerebral deformity that resulted from a mechanical appliance. The Osage infant about as soon as born is laid with its back on a plain board and thus confined to it by straps passing over the forehead, breasts, thighs, and legs. In this position the occipital portion of the head in adapting itself to the board becomes much flattened. Of this tribe I have ten crania and I have seen many of the Osage men, and all possessed the same occipital deformity; but I do not know that this deformity has become entailed. The tribe of Indians who destroyed the French garrison at Natchez, Miss., more than a hundred years since, a fragment of the Toltecan race of the aboriginal Americans, deformed their heads very extensively, reducing the occipito-frontal diameter of a large head to four inches. An anthropophagous tribe, the Attachapaws of Louisiana practiced upon their infants a similar deformity, but I do not know that it ever became entailed in either of the preceding instances. The opinion has been quite prevalent that the Turkish form of head, resulting from artificial means to adapt it to the turban, has become changed but the idea has been much flouted by Ethnologists, and very unjustly, I have no doubt; for a truly normal head in form is a rarity even in our best society. Very inconsiderable means appear sometimes to have been sufficient to affect the normality of the form. But the most disgusting forms of head are some of those which have been moulded by improper educational influences. This is not the worst, for they are as bad as they are homely; as disguisting to our moral sense, as to our visual. I have been brought to the conclusion that such artificial pressure to the head as will change its form tends to stultify the instruments of the mind's action. Directly in support of my argument, and of the affirmative side of the question we have a statement of fact from Hippocrates, in a recent publication purporting to be a translation of a portion of the writings of Hippocrates and Galen, but the name of the translator I have long forgotten, and the volume is not by me. Some of my readers no doubt are familiar with this work.

In the work just referred to, the translation of the statement made by Hippocrates is about this: A Scythian tribe settled in the country of the Crimea who fancied a greatly oblongated head, and to obtain this form they compressed the heads of their children in infancy.

They continued to produce artificially this peculiar form of head, till nature adopted it. His meaning here must be, the artificial form become transmitted or entailed, as with the Choctaws. He adds that these Scythians became at length to be known as the Macrocephali which in our language is long headed.

In the work to which I have made reference, Hippocrates informs us that a Scythian tribe settled in the counrty of the Crimea, who having a fancy for a long head, or one having a great occipito-frontal diameter, applied such artificial compression to the heads of their infant children as produced the desired elongation of head. In process of time nature adopted this form of head for this people, who at length became to be known as the Macrocephali or long headed people. When nature accepted this form, the practice of artificial appliances to effect the same purpose ceased.

The question that constitutes the subject of this paper, is here settled affirmatively, and is placed I think beyond the doubt of reasonable men, and the successful controversy of all.

CHLORATE OF POTASSA.

BY PROF. JOHN KING.

Chlorate of Potassa has been higly recommended of late years as a successful remedy in cancrum oris, when given in quantities of from half a drachm to a drachm in the course of every twenty-four hours, the dose varying with the child's age. In a few days, under its influence the offensiveness of the breath diminishes, the excessive flow of saliva is arrested, and the ulcers assume a healthy granulating character, becoming thoroughly healed in from seven to fourteen days. The remedy has likewise been found fully as beneficial in aphthæ, (follicular stomatitis) mercurial salivation, ulceration of the pharynx, boils, many eruptive affections, as eczema, impetigo, pemphigus, etc., and in local inflammatory conditions disposed to terminate in gangrene. In that distressing and frequently serious malady, nurses' sore throat, (stomatitis materna) it has also been found efficacious, and in my own practice I have found it superior in this affection to any other single agent. I have likewise administered it successfully in typhus fever and in typhoid conditions.

For some months past I have used chlorate of potassa in several disorders of the female genital organs, and in some cases it has exceeded my most sanguine expectations. In leucorrhœa depending upon inflammation of the vaginal walls, or of the os uteri, with or without simple ulceration, its internal administration, aided by vaginal injections of a solution of it has affected prompt cures. From my own experience with this agent in excoriation or simple ulceration of the cervix uteri, I consider it when used locally vastly superior to the caustics which have been in such high repute for these conditions; and in gonorrhœal vaginitis, its solution, used as an injection has been followed by an early disappearance of the disease.

M. Irambert states, that chlorate of potassa is a *sedative* to the nervous system and to the circulation when administered under certain pathological conditions; is *slightly irritating* to the larynx and bronchia; is a *moderate stimulant* to the urinary organs; in large doses is a *stimulant* to the organs of digestion, greatly increasing the flow of saliva, and, to a moderate extent that of the bile; and is an *alterative* and *stimulant* to mucous tissues. That it exerts a decidedly beneficial influence upon certain mucous membranes I am well satisfied from its results in my hands.

For internal use one and a half drachms of the salt may be dissolved in four fluidounces of soft water, of which, from half a fluidounce to a fluidounce three times a day is the dose for an adult. It may be given in an equal quantity of sweetened water or syrup, and the best period for its exhibition is about half an hour or an hour after each meal. If it produces catharsis the dose must be lessened considerably.

As a local application, a drachm and a half or two drachms of the chlorate may be dissolved in half a pint of soft water, of which, half a fluidounce may be used for an injection, repeating it three or four times a day. In some of the severe cases, in addition to the injections, I had the patients moisten some lint or a piece of soft sponge with the solution, and every night upon retiring to bed introduce this into the upper extremity of the vagina, removing it in the morning, and syringing the canal thoroughly with an infusion of equal parts of golden seal and geranium.

Whether the local employment of chlorate of potassa will prove as efficacious in other diseases of mucous tissues, as ophthalmic inflammations, gonorrhœa in the male, balanitis, catarrhal affections, inflammatory conditions or ulcerations of the bladder, etc., remains yet to be determined.

CHOLERA INFANTUM.

BY THEODORE C. MILLER, M. D.

Summer Complaint, as it has been called, is a disease which appears to be peculiar to this country. It is a feverish diarrhœa, or rather a gastro-enteric fever, combined with diarrhœa and vomiting. It appears mostly in the summer season, and thence has its common name.

This summer complaint is very closely allied to gastric fever, or gastro-enteric irritation, which when presented in an aggravated form is known as cholera morbus, or common summer cholera as it appears on the continent of Europe, especially in the great cities in the heat of summer. That kind of summer complaint appears also in towns and hamlets, and even in isolated farm houses. The mortality of summer complaint is very great, as is shown by the yearly statistics. The mortality among children from cholera-infantum appears the more striking when we consider how many families reside during the summer in the country, so that the number of children in the city in summer is considerably less in proportion than that of adults.

Cholera infantum makes its appearance as early as May, or June, and sometimes earlier, and approaches its height in July, abating somewhat in August, and but very few cases are to be met with as late as October. Those most frequently attacked are children in their second year. Seldom infants under six months, or children over four years of age have it. It is a disease of the period of dentition.

The disease is caused by the high and continued heat of the summer. The greater the degree of heat, and particularly the longer it continues without interruption by rains or refreshing winds, the more fatal will it be. Uncleanliness of the streets or houses may be one of the causes of its production, and foul gases generated from that uncleanliness are always increased in quantity and concentration by the continuence of high heat. I doubt much if simply cleansing streets and cities would prove such sure preventatives of this disease as some have supposed, while a high continued heat and confinement of atmosphere is continued and the little ones are exposed to it while the mucous membrane of the digestive tube is in an impressible, irritable state from the process of dentition. The bad condition of the atmosphere in impure localities or unclean houses must doubtless contribute greatly to this disease, for we find those most exposed, as in cellars and damp situations, from the rapid decomposition of matter under the combined influence of heat and moisture, and the developement of deleterious gases and their commingling with the surrounding atmosphere, have their health injured, and often a disease is produced of the alimentary canal, both in adults and in children.

Whenever the air is impure or mixed with gases, respiration and oxidization of the blood, as well as evolution of the substances thrown off through the lungs, is imperfectly carried on; and the immediate consequence is that the skin is called upon to discharge matters which in healthy respiration would pass out through the lungs. The skin being unable to perform this extra labor without suffering, has exanthems and rashes, often in the form of nettle-rash, but particularly a cold clammy sweat which constantly presses out in thick drops and which is always an unfavorable condition; or when the skin becomes cold and clammy, it shows that tissue to be too much enfeebled to perform the functions of the lungs; at least it can no longer impart oxygen to the blood.

The skin in this condition becomes like a sieve or bolting cloth, through which exudes the watery portions of the blood, and there is withdrawn from the system a large quantity of its circulating fluid. This loss of the watery portion of the blood induces a burning thirst, that the system may be in part supplied of its waste through the fluids drank.

A further direct consequence of the defective decarbonization of the blood caused by the impure gases inhaled, is the effort which the system makes to discharge this uneliminated matter through some of the other organs of elimination. The other tissues beside the lungs which eliminate carbonaceous matters, are the mucous coat of the intestines, and the liver. A considerable amount of carbonaceous matter is thrown off by the liver in the bile.

So long as the system can free itself from being over-loaded in these ways, it will do so, but it cannot always maintain much or long continued extra action in this direction without danger.

Derangements of this function of elimination appear in slight catarrhs of the organs of respiration, in colds, coughs, swellings of the lymphatic glands of the neck; these are followed, or may be entirely superceded by catarrh of the mucous coat of the organs of digestion, or increased secretion of the bile causing bilious diarrhœa.

As the digestive organs of children during dentition are especially irritable, the derangement of the system from defective decarbonization produces the summer complaint of children, or *cholera infantum.* When in the progress of the disease, the liver from over-action becomes exhausted and can no longer excrete bile, the discharges will contain little or none of that fluid, and will become pale, discolored, and having commenced to putrify before they are thrown off, they will have a peculiar cadaverous odor.

When the disease has arrived at this stage, it demands prompt and immediate medication. The object of the physician is to subdue the active gastro-enteric irritation or inflammation, and by that means also restore the liver to its healthy condition.

The greatest disadvantage, and even fatal injury to the patient may follow the use of astringents or opiates, which may for the time put a stop to discharges from the rectum but cannot restore the intestines or the liver to a state of health; and must increase the diseased action. The most dangerous of these agents is opium, particularly in the form of laudanum, or the old fashioned paregoric elixir; which are often used in these diseases by the ignorant both in and out of the profession. The hurtful effects of opium are increased by the peculiar action of the alcohol in which it is dissolved, which is very quickly and powerfully injurious in inflammations of the mucous membranes.

No doubt exists in my mind that no inconsiderable portion of the fatal cases are made fatal by the unscientific use of laudanum, which while it checks or stops the discharges does in no wise remove the gastro-enteric irritation, but restrains the healthy action of the nerves, and overcomes the contractility of the blood-vessels within the cranium, so that frequently in a very few hours the brain suffers from very severe blood congestion, coma, and even death; which fatal termination is produced by overloading the brain with blood filled with poisonous carbonaceous matter.

Narcotics should seldom if ever be used in the treatment of diseased children. Even hysociamus and the other deliriants, although far less hurtful than the somniferants, are not indicated in this disease. I have verified the opinion expressed by the junior Dr. Stiebec, principal physician to the Children's Hospital at Frankfort-on-the-Main, that the deliriants frequently produce dangerous results. It is true they are not as pernicious as they do not produce as severe irritation and conglution of the sensorium as the somniferants do; but no one can fail to perceive that they do harm to the brain, and also by their action on the intestines and lymphatic vessels and glands cause a tuberculous condition which is known as *tuberculous meningitis.*

A course of treatment which relieves the gastro-enteric irritation and restores the liver to the performance of its functions, and which also restores the skin to healthy activity will cure a very large majority of these cases. In Prof. King's Family Physician there are some valuable directions in regard to this matter. The use of chloride of lime, or chlorinated soda should not be neglected. A combination of rhubarb and magnesia with cinnamon to remove the accumulations of the bowels, neutralize the acidity present, and stimulate the alimentary canal, has been found very useful.

Hydrastis Canadensis by furnishing the tonic principle which has been wasted in the inordinate flow of bile, acting in its peculiar manner on the gastro-enteric mucous membrane, and preventing the food from undergoing a putrefactive chemical change, is peculiarly useful in these cases.

But to simply cure the case is not all that is required. It is very liable to return, and the same causes which produced the disease at first, co-operating with the debility and irritability of the whole system, are almost sure to cause a repetition unless they are removed, or the child is removed beyond their control.

DYSENTERY.

BY J. M. SIMMONS, M. D.

In the fall of 1856-7, dysentery raged in this country to an alarming extent. When the epidemic first pervaded our sections of country I had been engaged in the practice of medicine five years, but had never treated a case of dysentery. The disease had proved fatal in a great many cases both north and south of this place, and when it made its appearance here the people were considerably alarmed, and I was embarrased when called on.

My first patient was a lady about thirty years old, of a delicate constitution, and the mother of three children. When I saw her, Sept. 15th, she was suffering with painful discharges from her bowels of a bloody nature, excruciating pain in the rectum with tenesmus; abdomen very tender, tongue red on the edges, and considerable fever and thirst. I commenced treatment by giving her the following powders:

℞.	Leptandrin,	grs. vj.	
	Bayberry bark,	" xj.	
	Ipecac.,	" ij.	
	Morphia, Sulph.,	" gr. j.	M.

divide into six doses. One to be given every hour and a half until they were all taken. I directed her to take a dessert spoonful of Epsom salts in two hours after she had taken the last dose of the powders. I also applied cloths dipped in very warm water to her abdomen.

16th. The patient was better. The medicine had operated pretty well on her bowels. The discharges were mixed with bile. The tenesmus not as bad as yesterday. The fever had abated some, with not as much thirst. The abdomen was still tender. I continued the wet cloths and gave the following powder:

℞.	Leptandrin,	grs. iv.	
	Quinia, Sulph.,	" xij.	
	Ipecac.,	" iv.	
	Morphia, Sulph.	" ij.	M.

divide into four doses, one to be given every three hours through the day, and a dose of Epsom salts at night.

17th. The patient was still improving. The discharges were bilious with no blood, no thirst, and no fever present, I prescribed:

℞. Hydrastin,
Quinia Sulph.,
Bayberry bark, āā grs. viij.
Morphia Sulph., grs. ij. M.

divide into four doses, one to be given every four hours. My patient still continued to improve, and was able in a few days to attend to her domestic affairs.

Since that time I have treated a great many cases on the same plan, altering my treatment as I thought the case demanded, and I have only lost two patients; one of them I think caused her death by eating turkey and stewed fresh potatoes too soon after she commenced improving.

I am opposed to astringents in the first stages of dysentery and therefore I do not use the bayberry on account of its astringent properties. But bayberry is detergent and by giving it, and following with Epsom salts or castor oil, the bowels are cleansed of all fecal matter.

I think it impossible to cure a case of dysentery in this part of Arkansas without cleansing the stomach and bowels, and the best plan is to remove the cause. It is dangerous to give opium and nothing else to lock up the bowels, yet I have never seen any bad effect from giving it combined with an alterative. I think well of podophyllin in most diseases. It is a good alterative and cathartic, but I think it acts too severely in dysentery. I prefer Leptandrin in this disease to any other medicine as an alterative. Hydrastine is a good remedy in dysentery after the bowels are cleansed of all irritating matter- It is a tonic, and is healing to the bowels. Geranin is a good astringent when a good article can be obtained, yet I am sorry to say that there are some druggists who prepare medicines that are worthless, and geranin is one that has been *adulterated.* I have bought some twice since I have been practicing, medicine that was not worth anything, and if it had not been for Dr. T. J. Harris, I should never have bought any more. We were partners in the practice of medicine.

I have used the Tinct. of Gelseminum in dysentery with great benefit to my patient. It is a good diaphoretic, and sedative. It is an excellent remedy to keep down arterial excitement. I have never used the Chloroform vapor spoken of by Dr. Turrentine of Arkansas, but have used the warm hip bath to relieve the pain in the rectum, and when my patients can not retain an injection I take a pill of opium, or extract hyosciamus and morphia, and introduce it into the rectum.

I do not write this because I think the readers of the College Journal do not know how to treat a case of dysentery, or do not know the properties of the medicines I have mentioned, but I write to give my experience in this disease, with the remedies used.

MILK SICKNESS

BY W. H. PARSONS, M. D.

This is a peculiar and strongly characterized endemic disease of several localities of the west.

Symptoms.—There are two forms in which we meet with this disease,—the acute, and sub-acute or chronic. To the first the name of milk sickness is usually given, and to the latter the expressive title of *slows.* They are however the same disease, produced by the same cause, and differing in degree only. In the sub-acute form, the individual is languid, unable to make any exertion of body or mind, the appetite is variable, the bowels rather torpid, palpitation of the heart, slight stiffness of the limbs, trembling, and nausea if any considerable exertion is made, or if taking food is deferred beyond the usual time. After a variable period, and unless removed by the vital force of the system or by a proper course of remedial treatment, the disease assumes the acute form.

The individual is suddenly seized with extreme nausea, prolonged vomiting, faintness and prostration; the temperature of the body and extremites falls below the natural standards; the skin often grows cold and clammy; great fear and anxiety are depicted upon the countenance, the patient experiencing an undefined and aimless dread; the breath acquires a peculiar fœtor; the tongue is swollen; the bowels become obstinately constipated, and strong pulsation is observed over the whole abdomen, but especialy marked at the right of the umbilicus. The heart and large arteries beat with violence whilst the pulse at the wrist remains almost natural. The tongue is in most cases but slightly coated or changed from its natural appearance. A complete retroverted action of the stomach comes on, and at every effort of vomiting a fluid is ejected of variable appearance; it is sometimes colorless, sometimes like soapsuds, at other times like indigo, and in the last stage of cases that terminate fatally, it is of a dirty brown with a dark colored sediment resembling coffee grounds. But in all, it has the peculiar smell of the disease, and is generally represented by the patient as having a sweetish and most sickening taste.

As the malady advances, sharp pains in the limbs and neck are experienced; acute gastritis also comes on, accompanied by a peculiar and intense sense of heat at the præcordium, causing the patient to call out loudly for water to allay the burning sensation. The pulse now increases in frequency, the face and extremities alternately flush and become cold, evacuations of blood take place, and the vomiting becomes so violent that every article of diet, drink, or fluid medicine is ejected. During the intermissions of vomiting the patient usually lies on his back, putting his limbs about, and sometimes in a partially comatose state, but is at all times easily aroused when depressed. The irritability and retroverted action of the stomach continues throughout the disease, until convalescence restores the sufferer, or death closes the scene.

Nature. Cause.—Of the nature and causes of this disease there are various opinions. Prof. Robley Dunglison refers to (*Fever*, *Continued.* vol. 2d. p. 183.) a disease which was at one time ascribed to a plant called by the natives of Tennessee, *Indian Hachy.* The vegetable poison was presumed to enter the circulation, without necessarily inducing injurious effects on the animal, but afterwards causing fever and even death in those who used its milk. Of late, many inquiries have been made into the nature and causes of this disease which has received the names of *trembles* and *sick stomach*, but we hear no more of its being occasioned by the vegetable above mentioned, whilst it has been ascribed to other plants—the Rhus radicans or Rhus toxicodendron, (*J. J. Ilhenno*, *on Milk Sickness*, *Springfield*, 1843,) and even to arsenic in the soil, (*Seaton on Milk Sickness*, *Louisville*, 1841.) The discrepancy, amongst observers as to its nature is surprising, some denying that it is a distinct disease, and regarding it as a form of gastro-enteritis, (*N. Croockshank*,) others considering it to be an autumnal fever of a congestive type, attended with great irritability of the stomach.

Thus far the causes would seem to be wholly unknown. J. Travis, *Western Journal of Medicine and Surgery*, August, 1840; G. B. Graff, *Am. Jour. of Med. Science*, April, 1841.

In the State of Ohio, transforming the surface of the infected districts by the hand of art has been found infallible.

In man the disease is generally believed to be induced by using as diet the flesh or milk of animals infected with it; and it is affirmed by

Dr. Graff, that butter and cheese manufactured from the milk of a diseased animal are the most concentrated forms of the poison, although they may possess no appearance, smell or taste, which distinguishes them from the healthy article.

Having given the opinion and views of some of the leading physicians of the nineteenth century, I will now give my views of its nature and causes. I was raised in the western part of the State of Indiana, in the vicinity of an affected district, and from observation I found no appearance of the disease in winter or spring, until about the first of July, when the small streams became dry, and cattle that were permitted to go to the forest for their living became affected with the disease. The poison that caused the disease I think was the water of *Arsenic Springs*, which are there abundant in all seasons of the year. But when there is plenty of water, as there is in the winter and spring, the poison water does not affect the cattle, as they do not drink it, but as soon as the streams dry, the cattle resort to these springs and drink, and in the space of twelve hours the disease shows itself on all cattle except milk cows who are not affected, but their offspring die in one or two days after taking the milk. After an animal dies of the disease the carcass must be buried to prevent dogs and hogs from eating the flesh, which kills them as quickly as though they had drunk of the water.

Those living in the above districts who keep their cattle in enclosed pastures and water them from wells, have no milk sickness in their families. Some of the citizens living in the vicinity of the poison springs were faithless in regard to the water producing the disease, and to satisfiy themselves followed their cattle to such springs, saw them drink the water, and noticed that the cattle took the disease in two or three days after. Some of the leading men of the poison district, called the State Geologist to examine the water, who pronounced it arsenical, and that in his opinion was the cause of milk sickness.

Treatment.—The prominent indications in the treatment of milk sickness are, to allay gastric irritation, to relieve the affected organs, to remove constipation, and lastly to counteract the debility and exhaustion of the latter stages. The treatment that I have used in the disease is the following: Take 1 pint of fourth proof brandy, put into it a half pint of strained honey, or more if the brandy will dissolve it, and give the patient a tablespoonful every hour until it is all taken. Then give a brisk cathartic. Afterwards medicine should be given until the patient is restored to health.

HOW TO TREAT SOME OF THE TROUBLES OF LYING-IN WOMEN.

BY H. G. BARROWS, M. D.

In the use of this caption of the present article I merely mean to set forth a portion of my own practice and experience, but not to undertake to teach others who are older and abler than myself. The difficulties I have met in this class of patients are probably no different from those of other physicians; but experience in certain remedies is sometimes beneficial, and I give mine merely for the benefit of those of my professional brethren who may desire to adopt my course of treatment when occasion presents itself.

To premise a little, however. I may inquire if any of my brethren have had cases of pregnant women, where, for some cause, *extensive salivation* has obtained, causing the patient great uneasiness, inconvenience, and sometimes no little suffering. I doubt not that *one case* at least has been met with in the experience of every physician of any lengthened period of practice. One great question is, how shall we treat such cases, and treat them effectually? I know not to what immediate cause to attribute this singular affection, nor can I satisfactorily conclude what agencies are operating in the system during the period of gestation to induce this apparently diseased condition of the salivary glands, and perhaps exhalent vessels; whether it have its seat in general debility, dependent on this new action set up in the system, or whether it originates in causes as yet unexplained and unknown to science. At all events I have neither read nor heard a satisfactory explanation of the difficulty. I have a hypothesis of my own concerning it, and on that hypothesis I base the following practice, which, in many cases within my knowledge has been successful.

I make a free use of alkalies, as I find in these cases a good deal of acidity present, and also a strong predisposition to it. The stomach, in these attacks seems to be in a peculiar condition, requiring the almost constant exhibition of remedies tending to overcome acidity.

I find it also important to avoid a constipated condition of the bowels, and to this end I value frequent exhibitions of magnesia. I also direct the almost constant use of lime water as a gargle, and to rinse the mouth with which has a tendency to keep off, as it were, a diseased condition of the constantly forming saliva; and I urge it upon the patient to resist as far as possible, the *desire* to eject saliva. I discountenance the use of vegetable diet, and confine such patients to *animal food only*, and that of course in such quantities as judgment will dictate.

Sometimes this treatment will fail, and what course of treatment will not fail at some time? When it does I resort to opiates, keep the bowels open, and persevere in the treatment. There is a *time* when the difficulty will cease, but it is better to anticipate the time by the application of suitable remedies, and arrest the progress of the difficulty, if possible.

In lying-in women, *sore nipples* are not unfrequently a cause of great annoyance and suffering. Almost every physician has his own peculiar way of treating these cases. I have mine. It may be of no service for others to know it, yet there is a possibility that some of my brethren may discover something worthy of notice in it. The following is often very useful, sometimes effectual:

℞. Pulv. Borax, ʒi.
Aqua Pura, f℥iii.
Spts. Vin. Rectif., f℥ss. M.

With this mixture frequently wash the nipples. Sometimes great benefit will result from the application of the tincture of catechu.

Another excellent remedy may be found in the following:

℞. Ext. Opii, gr. j.
Aqua.Calcis.,
Ol. Amygdal., āā f℥iii M.

This should be applied to the nipples on lint.

But I must hasten to a close with this paper. I would like in doing so to speak of two more difficulties, viz. Painful tumors in the breast, which may occur at any time; and milk swellings of the breast, not uncommon with lying-in women.

In painful tumors of the breast, the following will be found by no means ineffectual:

℞. Iodid. Potass., grs. vii.
Muriat. Morph., " xv.
Auxung. Porcina, ℥v. M.

Let these articles be well and thoroughly rubbed together, and apply the ointment twice a day. In cases of "Milk Swellings" in the breasts I apply frequently, warm vinegar and persevere in it for twenty-four hours. If the pain and swelling be not abated, I apply leeches an inch below the circular margin of the breast, and promote the bleeding with warm water. When the bleeding ceases, I apply lard on cloth to the leech bites, and when they are healed, resume the vinegar. Bitter-sweet ointment is an excellent remedy. It should be rubbed in with gentle friction by the hand, and afterwards applied on cloth.

In these cases use *no* poultices, for they increase the difficulty.

Thus have I hurriedly, yet I hope perspicuously, set forth a few remedies which with me have been successful in a great degree, and which I hope may prove so with those who may choose to adopt them in like cases.

I need not add, perhaps, that after applications made to the nipples they should be properly cleansed before putting the child to nurse.

I trust that I shall not have proved tedious, or been guilty of taking up too much room in the Journal. I have been silent for some time and felt desirons of giving some token that I was not unmindful of it, or of the cause in which it is engaged.

THE MICROSCOPE.

BY PROF. T. E. ST. JOHN.

Nearly every branch of natural science is indebted to the microscope for a large amount of information which could have been obtained in no other way; and from the earliest periods of scientific research it has been adding truth after truth, and revealing to the gaze of the investigator a world of beauty beyond the cognizance of the unaided eye.

To the philosopher it gives abundant evidence of the handiwork of the supreme Architect of the universe. To the botanist it is of incalculable benefit, by the aid it gives him in watching the first beginnings of vegetable life, enables him to understand with precision the processes of growth in plants, and the function of each tiny vessel and tissue. By it the zoologist is enabled to learn the structure and habits of myriads of living creatures whose very existence would otherwise have ever remained undiscovered. But to the physician or medical student does it particularly commend itself by its utility, either as an aid to scientific anatomical research, or in the discovery of the causes of the various diseases which "flesh is heir to."

The time has arrived in the history of medicine when microscopical anatomy appears to constitute its basis, and it is impossible to study advantageously either physiology or pathology without first being perfectly acquainted with the minute structure of the various tissues and organs. The microscope does not teach us any general doctrines of the elementary part, but only discovers to us their microscopic form, and as a natural accompaniment, the laws which govern their structure and development.

In the earlier periods of the history of anatomy but little or nothing was known of the minute structure of any portion of the human body, and although the magnifying properties of lenses were known and called into requisition, yet their attempts were of little value because of the imperfection of the instruments, and the mistakes made in describing the various and strange appearances which were presented to their view. Borelli was the first to use this instrument in the examination of minute structures, but owing to the circumstances already named he presented ideas of their formation as novel as were the appearances which the microscope gave to his untutored mind. Thus in the description of pus globules which at the present day are known to contain a number of granules, he asserted that they were animalculæ, and that he had seen them delivering their eggs.

To the last two centuries belong all the important investigations that have been made in regard to the elementary structure of plants and animals. Malpighi (in 1628-84) was the first to witness one of the most beautiful sights that the microscope can reveal. Having had some time before advanced the doctrine, that the blood was not stationary in the vascular system but kept up a continuous circulation, he had no direct proof of his dogma other than that which was presented by the peculiar structure of the organs engaged in the circulation. Malphighi with his microscope gave positive proof of the truth of Harvey's reasoning, as it revealed the rapid blood current rushing on through the capillary vessels. How forcibly must he have been impressed with the truth of Harvey's doctrine, as he gazed upon that headlong current in the tiny membrane, which had never before been presented to the eye of man.

Cotemporary with Malpighi was Anton van Leeuwenhoek, who added much to the advancement of science at that period. Although the efforts of those observers as well as those of Ruysch, Swammerdam, Ellis, Fontana, Secberkuhn and others who followed, were brilliant, they were not sufficient to acquire a safe footing for the new science, and Histology made no very considerable progress until the commencement of the nineteenth century, when it was nothing more than a promiscuous collection of isolated observations.

It was in the year 1861 that it first acquired a rank co-equal with that of its sister sciences by the genius of a man to whom indeed Histology owes no great discoveries, but who understood, as no one before him had done, so to arrange existing materials and so to connect them with physiology and medicine, that for the future its independence was assured. In fact, Bichat's Anatomie Generale (Paris, 1801) was the first attempt to treat Histology scientifically, and on this account merely it constitutes an epoch. But the extensive improvements that have been made in the microscope in the past few years, have added immeasurably to the discoveries in minute anatomy, and during the last thirty years they have crowded so fast upon one another that the only wonder is that a connection has been preserved and microscopic anatomy has not been lost in minutiæ.

"To make microscopical observation really beneficial to physiological science," says Todd and Bowman, "it should be done by those who possess two requisites, an eye, which practice has rendered familiar with genuine appearances as contrasted with those produced by the various aberrations to which the rays of light are liable in their passage through highly refracting media, and which can quickly distinguish the fallacious from the real form; and a mind, capable of detecting sources of fallacy, and of understanding the changes which manipulations chemical reagents, and other disturbing causes may produce in the arrangement of the elementary part of the various textures."

When a plano—or double convex lens is mounted or properly secured in a frame it is called a simple microscope, and the power with which it will magnify depends upon the length of the focal distance. The shorter the focal distance the more powerful is the instrument.

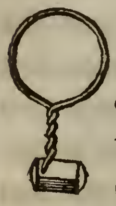
The following table gives the power of glasses of different foci, which however will be found to vary somewhat, owing to the difference of the eye in various individuals, but is sufficiently correct for all practical purposes.

A lens of 2 inches focal distance will magnify 5 diameters.
" " " 1 inch " " " " 10 "
" " " $\frac{1}{4}$ " " " " " 40 "
" " " $\frac{1}{10}$ " " " " " 100 "

Simple Microscope with 1 to 3 lenses.

Simple microscopes are mounted in various ways, depending upon the purpose for which they are designed. Some are made to turn on a hinge so that they may be conveniently carried in the pocket, and are composed of one, two or three lenses, by which means the power of the instrument may be increased.

These are of some advantage to the physician in examining various morbid growths or assisting the eye to detect foreign substances on the conjunctiva, etc.

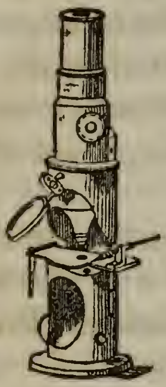


Stanhope Lens.

The Stanhope lens is invaluable, and should be found in the possession of every physician.. As its focus is on the surface of the glass it magnifies powerfully, and will be found of service in examining the character of tuberculous, urinary, or other deposits with much certainty.

Mr. Codrington has proposed a lens formed in the shape of a sphere, cut away around the centre. This is superior to the Stanhope lens but owing to the difficulty with which they are manufactured and the consequent increased price they have not come into general use.

The compound microscope consists of two convex lenses, an object-glass and an eye-glass; but by an examination of objects through this, the object as well as the field of vision will appear surrounded by colored rings owing to the decomposition of the rays of light. Its edges will also appear confused and indistinct, and to correct these difficulties various additions or improvements have been made both in the object and eye-glasses, so that the instrument as now presented is as near perfect as possible.



The cut represents the achromatic microscope, with three object glasses of a power of 20, 60 and 100 diameters, with illuminating lenses and rack adjustment.

Fig. 4 and 5 represent Nachet's and Queen's students' microscope, and are superior to the one last described as they are supplied with a joint which allows the observer to examine his objects more leisurely.

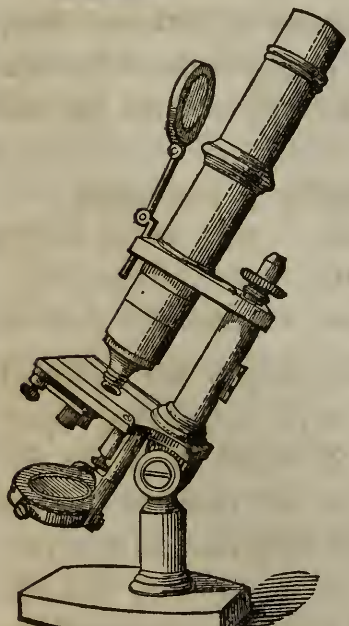


Fig. 4.

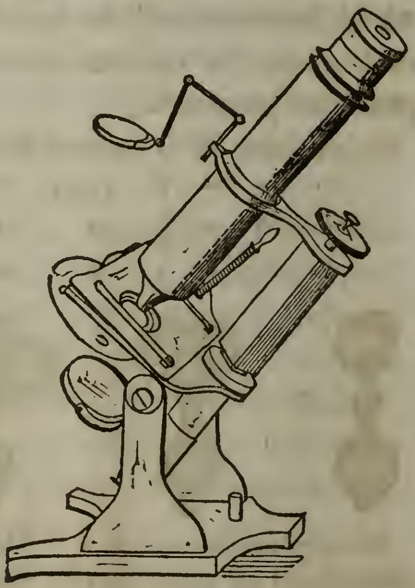
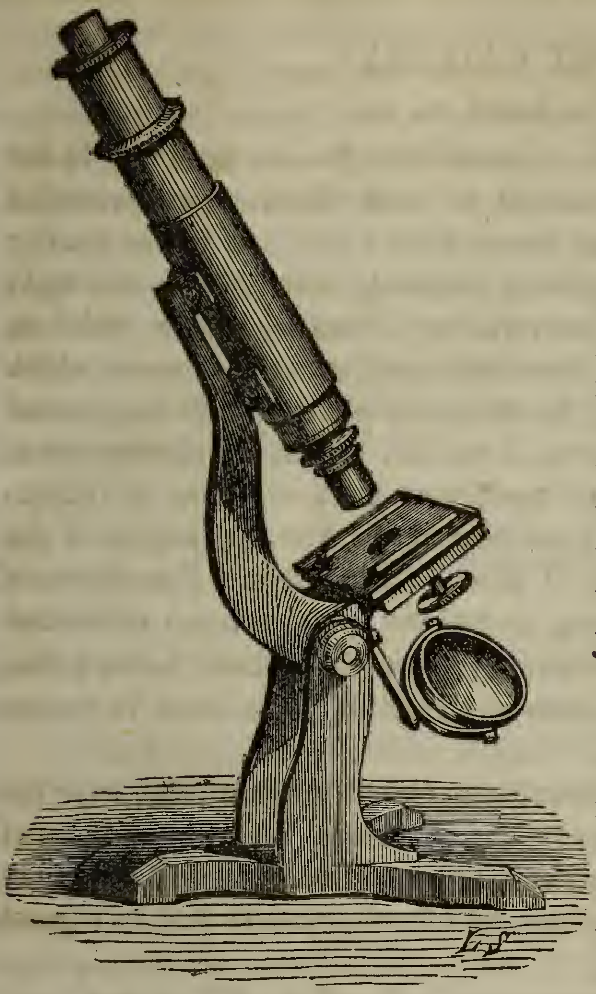


Fig. 5



Spencer's Students' Microscope.

For all practical purposes, the best instruments for the student or physician are those of Spencer or Grunow, of American manufacture.

It is supposed by many that the greater the power of the instrument, the more valuable is it to them, but this is a mistake, for the views thus given are less satisfactory, because the light transmitted becomes less intense; again, the greater the power the more difficulty do we find in placing a minute object in the field of vision.

In making examinations, the eye should be protected from all extraneous light, and should receive none but that which is transmitted through, or reflected from the object. The best position is with the instrument at an angle of 45 degs., hence the superiority of those microscopes supplied with a joint on which they may be turned. The eye should be clear and properly moistened with the lubricating fluid, and the light should be either that reflected from a white cloud on a sunny day, or a lamp or wax candle with a bull's eye lens.*

For the purpose of examining morbid structures a few chemicals are required as acetic, nitric, hydrochloric and sulphuric acids, and ammonia, liquor potassa, ether, and alcohol, and for general directions upon the manner of conducting these analysis, I refer the readers to the various works on microscopy, but before any knowledge can be gained in the examination of morbid structures it will be necessary for the observer to acquaint himself perfectly with the appearance of the various tissues and fluids of the body in their normal or healthy state.

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* All these instruments may be obtained of Queen of Philadelphia, at the following prices: Fig. 3, $15; Fig. 4, $60; Fig. 5, $50.

BILIARY CALCULI.

BY C. M. FINCH, M. D.

I was called a short time ago, to attend Mrs. S——, aged 26, in her third confinement, which was natural, of short duration, and attended with nothing unusual. Fifteen hours after I left her I was hastily summoned and found her suffering intensely with pain in the right side. Upon examination I discovered a fluctuating tumor which at intervals pulsated violently. From the position of the tumor which corresponded with the orifice of the common bile duct, and the general icterate hue of the entire person, I was led to suspect obstruction of the biliary duct. The heat and tenderness gave evidence of inflammation, confined solely to this particular spot. The appearance of the tongue also indicated a degree of local inflammation. Paroxysms of dyspnœa with acute pain darting toward the spinal column alternated with periods of comparative ease, together with a small feeble pulse, great anxiety, restlessness, nausea and vomiting, combined to render her situation very distressing.

Treatment—Flannel cloth wrung out of hot water applied over the seat of the pain and renewed at short intervals, and three grains of opium were administered every three hours. Upon my visit ten hours afterwards, I found her resting easy, and the tenderness had in a great measure subsided.

Expecting a return of the paroxysms I ordered the following:

℞. Ext. Belladonna, grs. viij.
Camphor, grs. xxiv.
Assafœtida, grs. xxx. M.

Divide into thirty pills, and direct her to take one pill at a time, every four hours, during the day.

The third day after she had commenced using the pills, and after she had taken fourteen of the number, she was again seized with a similar paroxysm, and in compliance with my request I was again called in. I found the paroxysms less severe than before, but the soreness and inflammation were as great. I immediately gave her the following:

℞. Ol. Ricini, f℥j.
Ol. Terebinthinæ, f℥j. M.

which was taken at once, but was not tolerated by the stomach.

Sinapisms were then applied over the epigastrium and the dose repeated. With some little difficulty it was retained, and in a little less than two hours it operated briskly upon the bowels, when the pain and distress suddenly ceased as if by magic. The dejection was very offensive, dark colored, and of a tarry consistence. Next day however while at stool she passed three calculi, the largest being about one-and-a-half inches in circumference, and nearly two inches in length. The remaining two were quite small. What seems a little remarkable in this case is, that she does not remember of ever feeling any pain or uneasiness before the period immediately after her accouchment. Her health has always been excellent. No irregularity of the bowels, appetite always uniform. In short she was "always well," as she expressed it. She did not complain of any pain during labor in the region of the liver, or manifest the least sign indicative of any obstruction here or elsewhere.

DYSENTERY, OR BLOODY FLUX.

BY WM. H. PARSONS, M. D.

In the treatment of disease, we should only use such remedies as do not injure our patients, those which not only cure the disease but do not create another that is more difficult to eradicate than the primary one. In dysentery only the large intestines may be affected, or the whole of the alimentary canal may be diseased. Even in the latter case, the rectum and colon suffer more than the upper portions of the track. In both forms of the disease the colon takes on more or less constriction, producing tenesmus and pain.

The symptoms of the two forms are often so nearly alike that it is difficult to distinguish them. But when the whole length of the intestines is diseased there is usually a fœcal diarrhœa which precedes the dysentery; but this is not always a diagnostic sign. Vomiting is also present at times, in the earlier stages of this form of dysentery.

When the disease is confined to the colon and rectum, there is usually a discharge of bloody mucus, or blood unmixed with fœces; but in the milder attacks fœces may be present in the stools. In some epidemics, we observe that both forms may be presented, and they may approach each other by imperceptible shades and be much modified by the peculiar constitutions of different individuals. The first form of the disease often increases the irritability of the whole of the intestines to a very great degree.

In the fall of 1853, I formed the acquaintance of a physician from the Isthmus of Panama where dysentery and bloody flux are prevalent.

Many persons die of the disease within seventy-two hours after the attack. He was attacked with the disease about twenty-four hours previously, and had tried every remedy which he had formerly used for similar attacks, without obtaining relief. A physician visited him, learned the disease that affected him, told him that in two hours he would have him cured, so that he would not be afflicted again with the disease while he remained on the Isthmus. He used the following remedy:

First gave an injection of soap and warm water to cleanse the bowels of the fœcal matter; after the evacuation he prepared another injection of Nit. Silver, grs. x., to one ounce distilled water. After waiting one hour he gave another injection of soap and water. After the second evacuation of soap and water, he gave of Nit. Silver, xv. grains, to one ounce of distilled water. That effected a permanent cure.

For children the nitrate of silver and water must be used according to the ages. For a child less than one year old, one grain of the silver to the ounce of water.

The Doctor told him to use fresh meat again freely, and that he need not fear a return of the disease.

I would recommend the remedy to the profession generally, as the most speedy and safe cure I have ever tried. I have used it in a great many cases with good success.

CASE FOR DIAGNOSIS.

BY J. WESTON, M. D.

Mr. C———, about medium size, took cold last autumn by sitting on the wet husks while husking corn. I did not see him until after having been attended some two months by an experienced physician who left the patient, saying: "I can do no more for you. Call whom you please."

When I first saw Mr. C., he was confined to his bed. Tongue thickly coated. No appetite—bowels very costive—urethra very much inflamed—apparent renal inflammation; testes very cold.

Every five minutes he wished to urinate, yet but few drops of urine would pass, while considerable thick puss was voided. I directed an injection with a strong decoction, of hydrastis canadensis. Internally I directed hops, (Ec. Dis. p. 1129.) in mucillage acacia, and an embrocation of the parts inflamed, with:

℞. Tr. Lobelia,
" Arnica,
" Capsicum, āāf℥j. M.

For the costiveness I ordered:

℞. Tr. Iris vers, f℥vi.
" Podophyllum,
" Nux Vomica, āā℥ij. M.

In doses of twelve drops each. To act as a tonic, I gave Tinct. hydrastis canadens. thirty drops at a dose.

With the above treatment Mr. C———, gained rapidly, and in less than two months after I saw him he was perfectly convalescent.

PECULIAR DISEASE OF THE SKIN.

BY H. ALVORD, M. D.

You ask for further particulars respecting the case of humor. It first showed itself on the index finger of the left hand about a year ago. It soon became sore. The patient employed Dr. R———, who applied collodion which relieved it while on, but when it came off it suffered the same as before. In about four months after it first started on the finger, it commenced breaking out over the left arm, when it appeared and felt like "jigger bites." In a few days he noticed it on the right arm where it seemed so much like that on the left as to attract his attention, and he afterwards noticed when it commenced breaking out on the leg, that in a day it would break out in a corresponding place on the other limb. He noticed the same on the body.

It is nearly all gone at this time, but now and then a pimple shows itself and the duplicate appears as regularly as ever. He showed me one this morning, the only one at present on or about his person—its duplicate on the other hand corresponding precisely. One peculiarity he noticed. When the pimple first commenced it appeared to be watery, after a little time would maturate, but he learned that if he opened it at the first and let the water well out it would dry up, but if he let it alone it would work deeper and become a very large and deep sore. This manner of cure, however was first noticed after he had commenced taking medicine. He thinks the medicine I prescribed relieved him, as he began to get better immediately on taking it, and thinks had he continued its use he would at this time be entirely relieved. He came from California two years ago first of April, was there about three years and six months, was six months going and coming, making four years absence; had no humor or breaking out while there, nor for one year after his return. His age will be 29 years on 8th inst., occupation blacksmith, habits regular; of this I can have no doubt. I may say I know him well. He would be received and acknowledged as a most excellent man in any community where known.

A few days ago I saw the lady whose case I reported, as published in volume II of College Journal, under the head of "Pulmonary Calculi." She appears very well, indeed judging from her looks one would suppose she enjoyed perfect health.

TYPHOID FEVER.

BY WM. H. PARSONS, M. D.

I propose simply, at present, to give the *treatment* I adopt in typhoid fever. Conceiving the disease one in which the blood has lost a part of its vital forces, and consequently debility and prostration are its essential characteristics. In accordance with this idea, I ever use means to preserve the strength of the patient, and avoid everything which can produce debility or loss of vital power.

As an illustration of my ideas, I will narrate a case.

On the 23rd of January last I was called to see a young man ill of Typhoid Fever. He was naturally of strong constitution, and had never been sick previous to the present time. His present illness had already continued eight days.

I at once ordered a bath of a weak solution of potassa; and for a diarrhœa which was present, I at first gave a large spoonful of castor oil. I applied a blister to the nape of the neck; and ordered an emulsion of slippery elm for his constant drink. I also gave:

℞. Prussiate of Iron, grs. ij.
Diaphoretic Powder, grs. iv. M.

and ordered this powder to be repeated every three hours; I gave wine-whey every hour, and beef-tea often.

The next day I gave five grains at a time of the Diaphoretic powder, every three hours, and sponged his surface as often with the weak solution of potash. The bowels had become tympanitic and for the relief of that condition I took one-and-a-half pints of pure water, to which I added two table-spoonfuls of bicarbonate of potassa and a half-a-pint of brandy, and with the mixture had the abdomen bathed every hour.

On the sixteenth day after the attack the fever began to abate; I then gave:

℞. Sulph. Quinia, grs. ij.
Gentain, pulv. " iij. M.

and repeated the dose every three hours. The abdomen was bathed often with warm water in which was brandy and capsicum.

As food I allowed the patient to have a soup made of the meat of a squirrel or a wild bird, and rice. As the strength increased I gave other food.

I have thought it advisable to give the diaphoretic powders some days after ceasing to use tonic. With this general plan, modified to suit the case, I have been quite successful.

MAMMARY ABSCESS—BELLADONNA.

BY T. B. BILLINGS, M. D.

Having recently had a case of this disease, and the manner in which it was treated resulting so favorable, I am induced to offer it for publication. It is one of those diseases which is not unfrequently attended with serious results, and any suggestion in regard to its treatment may be gladly received by the profession. I shall offer nothing new in regard to its medication at the present time, but simply corroborate the truth of a method already known, so far as the following case will do it.

On the morning of the 24th of February last I was called to visit Mrs. D., who was suffering to all appearance from a mammary abscess which must have terminated in suppuration had there not have been more than ordinary means resorted to.

She had recently been confined with her second child which she was weaning on account of her ill health. Upon examination, I found the right mammary gland enormously swollen, hard, knotty, throbbing, and so painful as to render the most gentle means for removing the milk unbearable. There was much fever, a quick hard pulse, with great depression and anxiety of the mind.

I ordered an application of the Ext. of Belladonna spread upon a linen cloth in the form of a plaster, to be immediately applied, leaving a small apparture in the center for the nipple to pass through, which was afterwards to be covered with a poultice.

After administering a cathartic to move the bowels, which were very costive, and the tinct. of veratrum viride to be taken until the pulse was brought to its natural standard, I left my patient until the following day, when I found her improving beyond all expectation. The tenderness and pain was greatly removed, beside much diminution in the size of the gland and its hardness. The veins which had been engorged and obstructed in their passage presented a much more natural appearance. There was but little febrile excitement and a very marked expression in the countenance of rapid improvement.

I applied the breast-pump and what remaining milk there was which had not flowed into the poultice was removed.

The local application *only* was continued, when on the third day the breast had assumed its natural appearance and she was perfectly well of the local difficulty.

POISONING WITH MURIATED TINCTURE OF IRON.

BY J. J. ROW, M. D.

I had attended on anæmic female for a cold, which I relieved, and for the *anæmia* I ordered the muriated tincture of iron in fifteen drop doses, to be taken half an hour before each meal. Under this treatment she improved. But I was called, after a few days in great haste, and found my patient sinking rapidly. Under the use of stimulants she vomited everything as soon as swallowed. Next day her nurse told she had taken *half an ounce*, of the tincture instead of fifteen drops as ordered.

On learning this fact, I at once gave her a large quantity of mucillage of gum Arabic, which combining with the iron led her to vomit a quantity of the characteristic black tarry matter, when she was relieved, and soon recovered.

Query.—Would not the carbonates of soda, or even potassa, to act as a chemical antidote to the acid, and to change the iron into a nearly inert carbonate of iron, have been safer and more efficient remedy than the mucillage, which in combination with the *muriated tincture of iron*, is not readily changed, and must have proved very hurtful, if not vomited up?—Eds.

EDITORIAL DEPARTMENT.

CLOSE OF THE SPRING SESSION.

The Spring Session of Lectures in the Eclectic College of Medicine terminated on Thursday evening the 13th of May.

The Dean reported the number of matriculants of the session to be fifty-eight, and the number then to graduate at eighteen.

He also reported that the total number of Matriculants in the College since its organization about a year and a half since, to be two hundred and thirty-five, and of graduates from it ninety, showing that the efforts of those connected with the College are heartily approved by the profession.

Then the list of the present Graduates was read as follows:

W. Milton Cooper, of Ill.,
William Nelson Forbes, of Ohio,
William Leonard Green, of Ind.,
John Davison Hogan, of Ohio,
George Washington, Hurst, of Ohio,
Mrs. Elizabeth Jones, of Maint,
John Orlando Mattoon, of Vermont,
Constantine Markt, of Germany,
James, Henry McCann, of Ohio,
John Stratton Moore, of Ohio,
Oscar William Scott, of N. York,
George Montague Thomson, of Ill.
J. B. Wheeler, of Kansas,
John Wilds, of Ohio,
Miss Dora Sabina Wuist, of Ohio,
Henry Clay Young, of Ind.

And for the Honorary Degree,

John Knox, of Prince Edwards Island,—and
William Elmer, of New York City.

The President then addressed the graduates as follows:

ADDRESS TO THE GRADUATES.

BY PROF. W. SHERWOOD.

Ladies and Gentlemen:—Before proceeding to discharge the official duty of publicly declaring the action of the Board of Trustees, and of formally presenting to those elected to the degree of Doctor of Medicine the documentary testimonials of such election, it may not be amiss for me to indulge in a few remarks suggested by the circumstances under which we are convened.

The Faculty of which I have the honor of being a member, are familiar with scenes like the present. This is the twelfth commencement in which it has been my privilege as a medical teacher to take part, and it might perhaps be supposed that such an occasion, having lost the character of novelty, must fail to be interesting. Such however is not the fact with myself, and I believe the same remark is true of my Colleagues. True, there is nothing new to us in the exercises of such an occasion; it is not a time for imparting nor for receiving scientific instruction, nor is it an occasion in which we can do much to advance the interests of our College, or increase the reputation of our faculty. Still the commencement day always comes crowded with interesting associations. At such a time we naturally pause to contemplate the past, and in doing so, it is almost impossible to withold the thoughts from running back to the period when we entered upon our professional career, and when we occupied the same relative position as those do whom we welcome into the commonwealth of medicine to-night. This I assure you enables us to appreciate the feelings and almost read the thoughts that rise in the minds of the present graduating class.

But other reflections also naturally arise in our minds. We call to remembrance the toil of body and mind, and the sacrifice of time and money we have devoted to the cause of medical science, and especially to the planting and fostering of an institution for the promotion of medical education, and although we sometimes may become, in a measure, disheartened under the apprehension that our medical brethren may not appreciate our efforts in their behalf, and that whenever worn out by labor or borne down by the weight of years, we shall be compelled to retire from active life, our labors may come to naught for want of men sympathizing with our views, who will take up and carry forward what we have commenced; such thoughts and apprehensions are dispelled at such an hour as the present. Your presence with us during the session that has just closed, is evidence that we have already secured the confidence and appreciative co-operation of your intelligent and efficient preceptors; your remaining with us after your arrival in our city and that too without persuasion, entreaty or argument from us, and in opposition to the most assiduous efforts of others to induce you to forsake our halls and patronize another Institution, is evidence that the intrinsic merit and superiority of the Eclectic College of Medicine is manifest to intelligent and unprejudiced students; and the successive graduation of class after class of educated and energetic medical men assures us that our College is constantly increasing in reputation and multiplying the number of those who will delight to honor and sustain her as their Alma Mater; and be ready when their services may be required to step into our places and labor to increase her usefulness and prosperity. You will not therefore blame us, if, as men holding the official relation we are laboring to sustain, we make commencement day a season of mutual congratulation, of honest pride and exultation. We feel to-night that it is our duty to thank God, take courage, and go on our way rejoicing in the prosperity we enjoy.

The session of our College which has just closed, being the fourth session under the improved organization of the faculty, has been characterized throughout by the utmost harmony among the faculty and the class. It has been a season of intense application on the part of teachers and students, but it has also been one of general health and constant progress. We are not called upon to lament the death of any of our associates, and it is believed all will be able to look back to the Spring session of 1858, without recalling a single important incident, that it will not be pleasant to remember when months and years shall have intervened.

I do not propose to present you with the stereotyped compliments which have been so often repeated on occasions like the present that they have lost all signification. It is enough that a Board of Trustees, uninfluenced by pecuniary considerations, and after closely investigating your character, course of study, and attainments, have unanimously elected you to the highest honor it was in their power to bestow. That board would have been pleased to respond in the same manner to all the applications that have been made to them, had it been in their power, but the rules they have adopted for their own government they could not violate. It is probable that those rules may occasionally exclude from graduation individuals of respectable attainments, and capable of engaging in reputable and successful practice; for there are some minds that do not require so long a time, nor such rigid discipline to enable them to attain proficiency, as is necessary in most cases; but such minds it is believed are generally endowed with a nobleness of character that will cheerfully acquiesce in the operation of a rule designed as a judicious guard against imposition, and which merely postpones for a time the attainment of their wishes. It is a maxim in criminal jurisprudence, that it is better for ninety-nine criminals to go unpunished than for one innocent person to suffer. The rule in every well ordered Medical College should be, that it is better for ninety-nine ripe scholars to tarry for a time without graduation, than for one unworthy individual to receive a diploma.

The degree of Doctor in Medicine conferred in the absence of such rules, is an unmeaning title. An institution whose list of graduates is always equal to the number of applicants, will soon find the number of applicants about equal to that of the matriculants; and the diplomas conferred will sink even below the respectability of matriculation tickets and operate as a label of disgrace to the holder, whenever presented.

I am sorry to say that any who desire such documents can find them in the market, but I assure you that no such character will ever attach to Diplomas having the seal of the Eclectic College of Medicine. This College does not traffic in bogus diplomas, and should you meet with one purporting to have its insignia, you may safely pronounce it a forgery.

I need not detain you with advice in regard to your future professional career. All needful instructions and admonitions have already been tendered you. Neither will we ask you to come forward and take a solemn pledge which shall forever after be as a collar on your necks and a manacle on your minds, trammeling your action and fettering your thoughts. We say to you to-night: Go forth as freemen, enjoying all the immunities of the republic of liberal medicine; free to think your own thoughts and express them in words; free to choose your remedies and methods of combating disease, amenable alone to public opinion, your consciences and your God. If you are successful the public verdict will be in your favor; if you are honest, and diligent your conscience will approve your course; and God who is greater than all will fully appreciate and amply reward your sincere motives and well-meant efforts to benefit your fellow men.

You leave us, and perhaps we may not meet again on earth; but though separated by space we may still be one in spirit, and though engaged in different fields, we may still be co-laborers in a common cause. May that cause, the cause of true medical science, the cause of human health, life, and happiness; enlist your best efforts wherever your lot may be cast. It is a noble cause. Not one perhaps in which so much wealth and notoriety may be gained as in some others; but one in which the mightiest intellect may find ample and constant employment, and in which the finest faculties of the mind, and most beautiful sentiments of the heart may be protected; for they will grow and reach their full development by feeding on the production of the soil they cultivate.

Go then and be useful and happy; happy in the luxury of your own usefulness, in the smile that kindles at your approach on faces where erst the pallor of disease and the expression of apprehension or pain sat enthroned; in the blessings of the aged and the young for the timely interposition of your skill in warding off the shafts of death from the objects of their love, in the consciousness of having promoted harmony and progress in the ranks of medicine; and in the approbation of your consciences and of your God.

GLYCER-AMYLE.

Under a variety of names, as *Plasma*, *Glycomel*, and *Glycamel*, the manufacturing chemists have prepared a combination of Glycerine and Starch, with the design that it shall take the place of Oils and Fats, in ointments and embrocations.

Ointments, cerates, or liniments, containing oils or fats, have been by many physicians and surgeons considered obnoxious to several objections. They are very liable to become rancid or putrid from their own chemical decomposition or the action of secretions upon them. They do not readily allow the medicinal agent with which they may be incorporated to be absorbed, or even to come in contact with the surface to which they may be applied. They do not readily allow the escape of pus or other excretions. They do not absorb the excretions but confine them under the ointment or application, and between that and the surface. The substances designed to act as remedies are usually insoluble in the fat or oil, and hence cannot be applied uniformly to the surface dressed. And the oily or fatty matter even after it has become rancid cannot be really removed, unless with the aid of an alkali or soap and friction.

These objectionable features have led surgeons earnestly to desire a substitute in which they do not obtain, and many have substituted beeswax and linseed oil, in place of the fats and other oils which more readily become rancid than linseed oil.

The *Yellow Ointment* made use of by Dr. Mussey of this place, and which has acquired some celebrity, is composed of yellow beeswax and linseed oil in such proportions as will ensure the desired consistency. It does not readily undergo change by atmospheric oxidation or by the action of the secretions.

Some ten or twelve years since Mr. Sartin proposed Glycerine in combination with amylaceous substances, and in 1856 he recommended a formula of:

℞. Tragacanth, ʒss.
Glycerine, fʒj.
Lime water, fʒij.
Rose water, q. s. M.

and form a soft jelly. This does not readily change.

Mr. Sacht, at the request of Dr. Budd, recently contrived a formula of glycerine combined with Starch, which serves as a basis of ointments, etc., in the place of fats or oils, and which after several months trial seems to answer its desired purpose admirably, and without change. He employed them in the proportion of:

℞. Glycerine, f℥j.
Starch powder, grs lxx.

The mixture is made by simply adding the ingredients together, cold, and gradually heating the mixture to about 240° Fahrenheit, and constantly stirring for some time. No small amount of caution is requisite to cause the two substances to unite without burning.

Most of *Unguents* of the Pharmacopœiæ and Dispensatories may be made by using this *Glycer-amyle* in the place of simple cerates, and following out the instructions given for making Ointments, the only care necessary is to be sure to have good materials.

Quite recently J. T. W. Smith, has tried a mixture of Fuller's Earth and glycerine, to take the place of lard in the formation of ointments. The peculiar advantages of this mixture are:—It may readily be washed from wounds without the aid of soap; it does not vary in consistency with a change of temperature; it allows a ready mixture of any substance soluble in water; and the fuller's earth is of itself a non-irritant, if it does not possess actual healing prorerties.

To form a proper basis for an ointment requires a mixture of equal parts of glycerine and fuller's earth. The earth may be reduced to an impalpable powder by simply adding to it water. It should then be thorougly dried, and passed through a fine seive, when it may be mixed with the glycerine by a palette knife without heating.

BOOK NOTICES.

Elements of Inorganic Chemistry, including the application of science in the arts. By Thomas Graham, F. R. S. L. and C., late Prof. of Chemistry in University College, London. Edited by Henry Watts, B. A., F. C. S., and Robert Bridges, M. D., Second American, from second revised and enlarged London Edition. Complete in one Volume. With two hundred and thirty-three illustrations on wood. Philadelphia, Blanchard and Lea. 1858.

This work, the first part of which has been before the scientific world for nearly six years, is at last complete and is now presented as a thorough exposition of the science (within the limits of the work) including all those new discoveries which have resulted from the labors of the many able chemists who for several years past have been scrutinizing with jealous exactitude the numerous facts of the science. It is the aim of the work to present in brief, the latest knowledge and the most easy methods of manipulations that the ceaseless activities of the many devotees to this beautiful and exact science have developed or designed.

The first 430 pages of the present work are the same as those issued in 1852 as *Part First.* All subsequent to the 430th page is new matter, including a copious suppliment, the intention of which is to bring down to the present advanced state of the science, those subjects included in part first. In the latter, reference is made to the suppliment in every case of additions to the original text, so that the inconvenence arising from supplementary corrections and additions is prevented as much as possible.

Among other matters of interest to the physician is an article on *Osmose*; from which a few extracts may not be without interest. "It is found that a given quantity of any salt which passes through the septum (bladder) into water, is always replaced by a definite quantity of water. The quantity of water which is thus replaced by a unite weight of the salt, is called the *Osmotic equivalent* of the salt. This quantity varies with the nature of the salt, and with the temperature, increasing as the temperature rises, but it is independent of the density of the solution. These results point to the conclusion, that the osmose between water and saline solutions, consists, not in the opposite passage of two liquid currents, but in the passage of the particles of the salt in one direction, and of pure water in the other. This conclusion is strengthened by Mr. Graham's observation that common salt diffuses into water, through thin membrane of ox-bladder deprived of its entire muscular coating, at the *same* rate as when no membrane is interposed."

The osmotic action of membrane has called forth several attempts at san explanation. Amongst others we find the following in the work under notice: "Osmose has likewise been attributed to the unequal absorption of the two liquids by the porous septum. Suppose the septum to be of such a nature as to absorb only one of the liquids, the water for instance. The water will then penetrate the septum, and coming in contact with the saline solution, diffuse itself into it. More water will then be absorbed, and subsequenty diffused, and thus a continuous current will be set up. If both liquids are absorbed by the septum, but in different degrees, and each is capable of diffusing into the other, like water and alcohol, the result will be the formation of two unequal currents in opposite directions. Water is absorbed by animal membrane much more rapidly than most other liquids, and accordingly, when a septum of this kind is used, the direction of the current is in most cases from the water to the other liquid. According to Liebig, a given weight of ox-bladder absorbs in the same time 200 volumes of water, 133 volumes of a saturated solution of common salt, 38 volumes of alcohol of the strength of 84 per cent., and 17 volumes of bone oil. When water and alcohol are separated by an animal membrane, the quantity of alcohol which passes into the water, but when the same liquids are divided by a thin film of collodion, which absorbs alcohol more quickly than it does water, the contrary effect is produced."

In regard to the chemical nature of the liquids, we quote: "To induce osmosis, the chemical action on the membrane must be different on the two sides, and apparently not in degree only, but in kind, viz., an alkaline action on the albuminous substance of the membrane on the one side, and an acid action on the other. The water appears always to accumulate on the alkaline or basic side of the membrane. Hence, with an alkaline salt, such as carbonate of soda in the osmometer, and water outside, the flow is inwards; but with an acid in the osmometer, there is negative osmosis, or the flow is inwards, the liquid then falling in the tube" of the osmometer.

In conclusion, this work is worthy of a perusal by every person who feels an interest in chemistry. And when we consider the growing importance of this department of physical science, and the bonds of union which are daily developing themselves between chemistry on the one part and physiology and progressive medicine on the other, we are led naturally to inquire, what progressive physician is not interested in the advancement of chemical knowledge?

An Improved System of Domestic Medicine; founded upon Correct Physiological Principles; comprising a complete Treatise on Anatomy and Physiology; the Practice of Medicine, with a copious Materia Medica, and an extensive treatise of Midwifery. Embellished with over one hundred useful engravings. Gotten up expressly for family use By HORTON HOWARD. New revised edition. Three volumes in one. Cincinnati; H. M. Rullison, 1857.

SOMETIME since the publisher presented us with a very good looking volume bearing the above title, for notice, but we have delayed from day to day, the presentation to our readers what we feel they *should know*, from very nearly the feelings that might lead us to delay performing a surgical operation for a low and degraded specimen of mankind. The operation *should* be performed, but our loathing might cause delay.

In 1850 Dr. J. Kost then of this city published an edition of Horton Howard's old work entitled; "An Improved system of *Botanic* Medicine; founded upon correct physiological principles; embracing a concise view of Anatomy and Physiology; together with an illustration of the new theory of medicine. To which is added a Treatise on female complaints, midwifery and the Diseases of Children."

By comparing the two titles, one might suppose them to belong to two different books, but, we find that *they are both printed from the same stereotype plates more than twentg years old*, with but slight changes; some of which we shall point out. We have in several instances noticed similar attempts to sell old books under a new guise, but our respect for the publishers or editors are by no means enhanced by the repetition of the offense.

Over thirty years ago, in 1823, Horton Howard became the General agent for the West, of Samuel Thomson, for the sale of his *Rights to Practise Thomsonism.* As Thomson's agent he did much to diseminate Thomsons little books, and proposed to publish one larger and fuller; but his master not being willing to be out-done in any way, forbade it, and hence arose a quarrel, a law-suit, and finally the the publication of Howard's Practice.

In the Thomsonian Recorder, for November 17th, 1832, under the head "Innovations," and speaking of Howard's book, the Editor said, "Among the arrant adventurers for medical fame and pecuniary advantages, connected with their stupenduous projects of authorship and speculation, we notice David Rogers, Charles Miles, Joseph Baker, and *Horton Howard.* * * Literary pilfering has become extremely fashionable. *Thomson is the foundation of the work.*" In other places in the same number of the Recorder, the Editor says; "With a tongue-pad's skill, he can say much about a trifle. He has quite a tinge of the book-maker's craft. *Every thing contained in the book of real importance to the common reader, could be reduced to the size of an almanac*" * * * "As Smith pilfered his book from Thomson, even so Howard, Baker, and Co., have rifled the pages of Thomson and Smith." In the *Recorder* for December 1st 1832, Samuel Thomson, in his Address to the public, said in regard to Howard's book; "A large portion of his book and plates are copied out of Samuel Henry's New and complete American Family Herbal. As the copyright has expired and poor Henry dead, he has taken the liberty to copy a great part of the work, and palm this literary pillage upon the world as a book of reformation, new discoveries, and wonderful improvements. I can show any gentleman his account of new articles printed in Boston, 1814, with his cuts and pictures."

We have not been able to obtain Henry's work here referred to, and cannot tell the truth of this allegation, but we *do* know that the cuts in this *new* book, are the same as in the edition of 1836, and the same that have appeared in several other Thomsonian works of later date, and particularly in a late work on Domestic Medicine, and another on

Materia Medica. These old wood-cuts have been reproduced so often, and under such different guises, that the profession looks with suspicion upon any work that contains them.

The *third* edition of Howard's practice, and the earliest we have been able to obtain, was published in 1836, three years after the death of the author. The *fourth* edition was published by Dr. J. Kost in 1850, and from the old stereotype plates, which have also been used to print the present book; but in a Preface to the present edition we are told that the "department of Anatomy and Physiology, has been almost entirely rewritten, "but the department of practice has *been so near perfection* that little improvement has been admissible." * * * "The present publisher has had the services of a very experienced practitioner, and a popular teacher and Professor of medicine."

Who this popular *Professor of Medicine* is we are not informed. Rumor has whispered the former publisher, Dr. Kost; but such cannot be the fact, *for no right minded, or honorable man would anonymously allude to himself* in such terms as are used by the Editor in alluding to Dr. Kost and his works. But whoever the editor is, he has shown great caution not to increase expense in interfering with the old plates, but in many instances the page is made too short by cutting out a part of it.

In addition, it is but justice to say that the Rev. Dr. J. T. Wells whose formulæ are quoted in the book, says they are nearly all erronious, and that he has endeavored to have them corrected without success.

In the present form, the external appearance of the work is quite good, but internally it must lead to disappointment among the people, while the profession will feel deeply chagrined that such a stale and imperfect old Thomsonian work should now be offered for sale as an *Improved System of Domestic Medicine.*

Hydropathy: or the Natural System of Medical Treatment. An Explanatory Essay. By Edward W. Lane, M. A., M. D., Edin., London, John Churchill.

Having seen the above work alluded to as the fairest and best work published in the English language on Hydropathy, we were at the expense of its importation.

On examining it, we feel assured that its title has misled many, as probably Hydropathy at one time may have done its author.

It is *not* a work on Hydropathy, or the Water Cure, and the author is careful to state that fact. On page 10, he says: "From what has just been said, it will be seen how inadequately the terms *Water-Cure* and *Hydropathy* express the treatment pursued under these synonyms; and it can hardly be sufficiently deplored that *natural system* of medical treatment, made up of so many concurrent and independent appliances should ever have received any such designation." And again, on page 131, he says: "I began this treatise by taking exceptions to the name hydropathy which must, I conceive, eventually pass away and become merged into something broader and better; and I have fully announced that *I do not consider it in the smallest degree*, as a panacea."

From these quotations it will be seen that the word *Hydropathy* on the title page is a misnomer. It is one of those books, like Headland *On the Action of Medicine*; Williams' *Principles of Medicine*. Bennett's works, Quain's Surgical writings, Sir John Forbes' recent work on *Nature and Art in the Cure of Disease*, and many other modern works, which go to show that all classes and schools of practitioners are with more or less clearness and confidence, looking for the realization of their hopes in the progress of RATIONAL MEDICINE.

A System of Instruction in the Practical Use of the Blowpipe; being a gradual course of analysis for the use of Students and all those engaged in the examination of metallic combinations. New York, 1858. H. BAILLIERE, Publisher.

WE saw announced some time since the publication of the above work with the name of J. Milton Sanders as author; and for reasons which must be quite apparent to those who have read the COLLEGE JOURNAL articles, pp. 94—131—144—215—165—342 and 349 of Vol. I., and pp. 82 and 418 of Volume II., we have looked for the appearance of this little work with lively interest. But for reasons probably best known to the Author, no copy has fallen under our observation, and as desirous of supplying our readers with the latest intelligence relating to the literature of our profession, we must be content this time to give it at second hands.

Fortunately, the American Journal of Science and Arts, for March, edited by the Sillimans, Dana, and others, contains a fair and somewhat full notice of Prof. Sanders' work, and from that notice we make the following extracts:

"We had occasion recently to criticize a publication issued over the same name; (See COLLEGE JOURNAL Vol. II. p. 82,) and we could wish that now we had only to commend. *But we should not be just to good English or good science if we were so to treat it.* Besides much incorrect use of plain English, we find German idioms strangely intruded on the language of the laboratory, and also misunderstood."

After pointing out several glaring errors and scientific falsehoods, as well as extreme ambiguity of langauge, the Reviewer says:

"After 178 pages of the proper treatise on the blowpipe, the author finishes his labors by *copying bodily*, *typographical errors included*, about 90 *pages from Blanford on the behavior of minerals before the blowpipe.*"

Where Prof. Sanders is as well known as in Cincinnati and Memphis, there is little need to present these and similar facts in regard to him, but however unpleasant the duty, we wish to give the necessary information to others who may not have the misfortune to have known him.

The Unwelcome Child; or, The Crime of an Undesigned and Undesired Maternity. By HENRY C. WRIGHT, Boston BELLA MARSH, 1858.

THIS is one of those works which the present active searchings into matters having any bearing on human rights and human duties are constantly producing. Its character is clearly set forth in its title-page.

With wonderful force and an entire absence of anything that can offend, the author addresses the public on a subject which all who have given it thought will admit is of deep importance, and the result must prove only beneficial, and that in an eminent degree.

Outlines of a course of Lectures on Surgery, delivered by R. GEDDINGS, M. D., Professor of Surgery in the Medical College of South Carolina. Prepared by consent of the author by Drs. WARING and LOGAN, Charleston, S. C., S. G. Courtenay & Co., 1858.

THE editors of this work have caused to be issued another American contribution to the Principles and Practice of Surgery. Although they have not added much to the general fund of Surgical knowledge, they have presented in good style an abstract of the chirurgical art as taught by one standing well in the profession. From these printed lectures we are assured that Prof. Geddings has given his pupils a thorough course of instruction. The unpretending manner in which the work is announced cannot fail to meet the approbation of every reader. The pupils and alumni of the Medical College of South Carolina, for whom the work is particularly designed, will appreciate and enjoy the efforts of the editors, and be enabled to retain more lastingly the teachings of their favorite Professor. For the general practitioner the subjects treated need illustrative diagrams to render them more easy of comprehension. Those pecuniarily interested in the work will be remunerated for illustrating future editions.

The American Eclectic Practice of Medicine ; By I. G. Jones, M. D., late Professor of Theory and Practice of Medicine in "The Eclectic Medical Institute of Cincinnati," etc., etc. Extended and Revised at request of the author, by William Sherwood, M. D., Professor of Medical Practice and Pathology in "The Eclectic College of Medicine," formerly Professor of General, Special and Pathological Anatomy, in "The Eclectic Medical Institute of Cincinnati," etc. Vol. II. Cincinnati : Moore, Wilstach, Keys & Co., 1858.

Four years ago, at the earnest request of his former colleagues and friends, the late Prof. I. G. Jones had published the volume, of which we are now presented with a *revised* and *extended* edition ; and since then his Practice has been received by the liberal portion of the profession throughout the country as *the practice*, and far superior to all others.

But as a new editon was called for it has been very carefully revised at the request of the author, now deceased, by his former associate, and is presented to the profession with many additions, corrections of errors and oversights, and an entire article on *Typhus Fever*, and another on *Scrofula.*

The various additions, and *Notes on Treatment*, as well as the new articles by the present Editor, have been so arranged as to preserve the former scope and design of the work—and while it is rendered more perfect and complete, the original arrangement of the author is not interfered with.

The mechanical execution of the book is admirable, as might be expected from the standing and reputation of the Publishers, and it is proper for us to feel no small degree of pride in the work both on account of its professional and mechanical superiority. It is bound so as to match the *First Volume*, as noticed by us in the College Journal of last year, page, 478.

MISCELLANY.

GYPSUM FOR BANDAGES.

Pirogoff, the great Russian Surgeon, for some time past has been in the habit of using as a substitute for starch, plaster of Paris applied to a common bandage. The rapidity with which it dries renders it one of the best agents that could be devised to stiffen a dressing. The starch bandage of ordinary use is several days in becoming stiff enough to retain a limb in a straight position, especially if it be necessary to move the patient soon after the reception of a fractured injury. The plaster of Paris hardens soon enough to prevent the bandage from creasing by the involuntary movements of the patient. This fault with the starch bandage is not trivial, as the skin being unequally compressed, blisters and sloughs. The pulverized calcined plaster may be applied in this way :—Let a sufficient quantity of it be wetted to a pasty consistency just before use. It is then to be spread with the hand upon each layer of bandage that encircles the limb until four or five thicknesses are laid on. The dressing becomes immediately stiff, and may be allowed to remain for weeks or until the broken bones have united unless swelling or other complications urge its removal. It is to be borne in mind, however, that no tight and unyielding dressing is to be applied to a fractured limb under ordinary circumstances until several days have elapsed from the injury, as the tumefaction that ensues at first, renders it painful and dangerous. Much serious mischief has been done by the immediate resort to a stiff dressing in treating a fractured limb.

ECLECTIC MEDICAL ASSOCIATION OF INDIANA.

This Association held its second annual meeting at Indianapolis, commecing on the 13th of May, and adjourned on the 15th. The deliberations of the convention were conducted with the utmost harmony. A great deal of business was transacted during the short time the convention was in session. The following is a list of the officers elected for the ensuing year, viz:

President—J. W. Young, Gosport.
Vice Presidents—J. P. Gill, and J. L. Grinnel.
Recording Secretary—O. H. Kendrick, Indianapolis.
Corresponding Secretary—J. P. Pope. "
Treasurer—W. H. Kendrick, "

The establishment of a school of medical reform, under a charter procured several years ago, from the legislature, and the publication of a medical Journal, were both referred to appropriate committees, who will report at the semi-annual meeting of the association, to be held in this city, on the second day of the approaching State fair. The prospects of the association are flattering, notwithstanding the "outside pressure," there being a *spirit within*, that "laughs at impossibilities." The cause of reform is advancing in Indiana, and the establishment of a reform school in our midst, is looked upon as one of the "fixed facts" of a not very distant future. A goodly list of new names were added to the list of our membership.

O. H. Kendrick, R. Secretary.

Indianapolis, May 15*th* 1858.

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ORIGINAL CONTRIBUTIONS.

THE MODERN TREATMENT FOR ANEURISM.

BY PROF. A. J. HOWE.

The rational and successful treatment for aneurism has been a desideratum of the surgical profession in all ages. For a period of fifty or sixty years the operation by ligation of the vessel near the sac was a favorite with the surgeon, as it was at once brilliant, rapid, and attended with considerable *eclat* among the lookers on. But so often was ligation followed by fatal results immediately or ultimately, that other means have been devised by those who have more regard for the lives of their patients than their own reputation for dexterity in applying ligatures. Among the recent plans for coagulating the blood in the tumor, for that is the object of every kind of treatment, is the introduction of an acupuncture needle through the walls of the sac, and having applied the wires of a battery to its ends, the passage of a current of electricity through it. The operation is best adapted to the treatment of small, superficial aneurisms of a nævoid character ; and is most effectual when the vascular mass is transfixed with platinum wire and heated with galvanism. The repeated applications of per-chloride of iron to nævi have proved beneficial in many cases, and not unfrequently resulted in complete cures. Lately Mr. Fergusson of London, has succeeded in obstructing the circulation in the sac of a subclavian aneurism by kneading the tumor with his thumb and fingers after the blood was shut out from it by temporary pressure upon the main trunk on the cardiac side of the sac. The pulse was immediately arrested in the vessels below, and continued so for hours. A similar manipulation was practiced the next day, and the effect upon the circulation of the arm was more lasting. Seven or eight days elapsed before pulsation could be detected at the wrist. The tumor gradually diminished in size, and at the end of seven months the evidence of recovery promised a successful issue; but subsequently inflammation attacked the tumor and the case terminated fatally. An examination of the parts showed the axillary artery to be blocked up, and nothing to contraindicate a repetition of the trial in a favorable case. This presented itself some time afterwards, and the manipulating plan seemed to be successful.

The idea had long been entertained from the spontaneous cures resulting in a number of instances, that a coagulum had become disengaged from the inside of the sac, and washing into the distal orifice of the tumor, had blocked it up. This undoubtedly led Bradsor to propose the ligation of the vessel upon the distal side of the aneurismal tumor. Fergusson, taking advantage of the hypothesis based upon spontaneous cures, and the results of Bradsor and his fellows, conceived the plan of opposing a natural barrier to the circulation by disengaging a mass of coagulated fibrine that is usually present along the walls of a large aneurism. The result of his cases strengthen the idea, and bring support to the theory, but enough has not been developed by the history of spontaneous cures and the facts elicited in Fergusson's cases to establish this as anything like a settled course of treatment for a majority of aneurisms. If the experiment be repeated it should be with extreme caution, and in a well selected case. By the latter is meant, one which is not adapted to treatment by compression. It will be understood at once, that if the coagulated mass be not sufficiently friable for the purpose in view—a condition that cannot be foreknown—no clot can be disengaged, and the attempt will be attended with failure and hazard. The manipulation too may rupture the sac, or provoke destructive inflammation.

The injection of fluids into aneurismal sacs, is a plan of treatment well known to the profession; but the unpleasant consequences attending it in a majority of cases has led the conservative to beware of a step so hazardous. The plan possesses no advantages over galvanopuncture, or the introduction of threads for points of coagulation. Either of these plans may be safe and successful when applied to small aneurisms of the forearm, scalp, etc., but ought never to be adopted in the treatment of the disease in the larger arteries.

The treatment by *direct compression* upon the aneurismal tumor was at one time heralded as possessing superiorities over other plans. But in an extensive practice it was found uncertain in its results, inefficaceous in a great number of cases, and so dangerous in many instances as to be followed by rupture of the sac from ulceration, inflammation and gangrene. For aneurisms of small size and recent formation, well adjusted and steadily maintained direct pressure may answer the desired purpose, but no reliance can be placed on it in the treatment of large tumors.

Indirect compression, for the treatment of aneurism of the larger arteries, is at the present time, beyond the limits of discussion, the most perfect of all known agencies brought to bear in the management of this often intractable disease. In 1825 Latouche in a thesis called attention to this manner of treating aneurisms, but the credit of priority in this method belongs to M. Belmas of Strasburg, a young surgeon who had been a student of Latouche. In order to secure the advantages of indirect compression, the force must be brought to bear moderately, and at different points along the limb when practicable. The apparatus must be so arranged that the counter pressure shall be distributed over considerable surface, and the pads be connected with the counter-pressing splint in such a manner as to be brought to bear upon the vessel at several points with thumb screws. In popliteal aneurism for instance, the splint made of wood, woven wire, or other material, should be concave and enclose a quarter or a third of the circumference of the thigh. Arched arms moveable by rachets and screws and tipped with pads, must be connected with this to the number of two or three, and at distances of from eight inches to a foot apart. These are to be brought to bear so gradually upon the course of the femoral artery as to exercise a gentle restraint upon the circulation without producing pressure enough to induce sloughing, or pain that shall be intolerable. The pads should be so constructed as to imitate in pressure the thumb when applied for a similar purpose. By this provision little violence is done to the veins and nerves. A convex pad of vulcanized India rubber is preferable to other material. The pads must be moved from time to time as the circumstances of the case require, and the patient is to be kept in a quiet recumbent position for two or three weeks, or as long as the treatment may be demanded. The pressure is to be applied until the force of the circulation is diminished, or even checked, but not so long or firmly as to endanger the permeability of the artery. The blood is thus given an opportunity to coagulate in the tumor and become organized without the hazard of gangrene in the parts, or of the limb below the compression.

It is not to be inferred that *every* case of aneurism is curable under this treatment, yet if it fails the chance by ligation is not cut off. To resort to the ligature at the present day without a previous well directed attempt to cure the case by indirect compression, would reveal a recklessness on the part of the surgeon little short of madness. No one has done more than M. Broca of Paris, to correct the impressions of the profession in regard to aneurism, and establish a rational course of treatment for a disease that has often baffled the attempts of the most skilful. It may take years to convince the butchers in the profession that compression in the treatment of aneurism is more effectual than ligation, yet rational views upon all practical subjects in science are eventually sure to prevail.

MERCURY.

BY J. A. HENNING, M. D.

I am aware that this medicine, in its various preparations, has received a full share of discussion, especially by those that are opposed to its medicinal use; but it will yet bear more until it is entirely eradicated from our Materia Medica. *Mercury* by itself is seldom employed by practitioners as a medicinal agent, only as " the last remedy," but the term is generally used indiscriminately for convenience, signifying one or all of its various preparations. This term is very appropriate because these preparations produce constitutional impressions alike, though some of them act more speedily than others.

Dr. Hooper says: " Mercury produces universal irritability, making the constitution more susceptible of all impressions. It quickens the pulse, increases its hardness, and occasions a kind of temporary fever. It produces fever. In some constitutions, it operates like a poison." Dr. Bell says: " Mercury excites restlessness, anxiety, and a very distressing and irritable state of the whole body. In some it produces delirium, in others palsy and epilepsy." It is so subtle that it penetrates vessels into which colored water cannot be injected; there it lodges and rankles in the bones, joints, vertebræ, etc., making the system a barometer going up and down with the weather; producing caries of the bones; initiating rheumatism, gout, and many other diseases. Prof. Drake, in the Western Journal of Medicine, Vol. II. p. 636, says: " Mercury has been found in the bones, blood, brains and nerves."

This statement is corroborated by many writers of the old school. Yet mercury is used as a therapeutic agent with the idea it will fulfil more indications than any other medical agent in the Materia Medica. Prof. Harrison says: "We once saw a little girl four years old, with an attack of fever, who died from the mercurial cancrum oris. Other children we have seen, more advanced in years, who fell victims to the disease, or who were mutilated by it, their countenance being shockingly deformed by the sloughing and subsequently puckered cicatrization. Upon this topic my thoughts have been much directed from the melancholy termination of cases of mercurialization in children, *which we have witnessed in our own practice.* We lost a case, from the ravages of mercury on the mouth, in a boy of eight years old, who was apparently recovering from hydrocephalus. It has been my lot to see more cases in consultation than in my own practice, in which death or mutilation has occurred from continuing the use of calomel too long, or from giving it in disproportionate doses in attacks of sickness in children. One dose of eight grains brought on gangrenopsis in a boy of ten years of age, who had several years anteriorly been mercurialized. Death, under the most revolting mutilations of the face took place in three weeks after he took the calomel."

Numerous other abnormal conditions are produced from its use even if prescribed with the greatest care, which are named by Dr. Pereira; as eczema mercurialis, miliaria mercurialis, otorrhœa mercurialis, diarrhea mercurialis, neurosis mercurialis, neuralgia mercurialis, paralysis mercurialis, tremor mercurialis, hydrosis mercurialis, and hypertrophies of many glands in the system. In my practice, I see patients often laboring under the influence of mercury, and few of those cases are aware of the cause of their various complaints; but I am glad to inform the public that many of the inhabitants of the northern portion of Indiana, at the present day, are discarding the "authority" of the old school system, and employing practitioners friendly to Rational Medicine.

Pereira says: "After absorption, mercury effects changes in the qualities of the blood and in the action of the whole organism, but especially in the apparatus of organic life. Soon after salivation has been established, the blood exhibits an inflammatory crust. At a later period its color deepens, and its coagulability is diminished; the proportion of clot, and therefore of fibrine to serum becomes smaller." "The formation of albumen and mucus," says Detrich, "sinks to that of serum; the whole organic formation of the patient is less consistent and cohesive." Of its action he says: "We must therefore, endeavor to accumulate more facts, in order to illustrate the effect of calomel, and for the present confess we have very imperfect information respecting the nature of its action." This agent when once administered may or may not produce ptyalism, and when it does: "Who is there that can stop the career of calomel when once it has taken the reins into its own possession? He who resigns the fate of his patient to calomel, is a vile enemy to the sick, and if he has a tolerable practice, will in a single season, lay the foundation of a good business for life." (N. Chapman, Professor of Materia Medica in the University of Pennsylvania.)

Some writers assert that they never saw evil effects follow the use of calomel, and I have conversed with physicians who positively assert that it is a harmless remedy and can be used with safety and great benefit to the patient whenever it is indicated. But to this Dr. Pereira replies: "Melancholy experience compels me to *contradict* them. Many times I saw, under those large long-continued doses of calomel, hydrocephalic symptoms suddenly vanish, and inflammation of the intestines arise, which terminated in death. Still oftener I observed this unfavorable accident from an incautious use of calomel in croup: viz, when all the frightful symptoms of this tracheal inflammation, which threatened suffocation, suddenly vanish, and enteritis developed itself, which passed rapidly into gangrene, and destroyed the patients." Prof. Graham, of the University of Glasgow says: "When I call to mind the numerous cases of ruined health from the excessive employment of calomel that have come to my own knowledge, and reflect on the additional proofs of its ruinous operations which still daily present themselves, I can not forbear regarding it, as commonly exhibited, as a minute instrument of mighty mischief, which instead of conveying health and strength to the diseased and enervated, is made to scatter widely the seeds of debility and disease of the worst kind, among persons of every age and condition."

The friends of Rational Medicine not only oppose it as a therapeutic agent, but totally exclude it from the list of remedial agents in the Materia Medica. We oppose its use, not for any prejudice or preconceived captiousness, but conscientiously believing that it is uncalled for, and frequently proves destructive to health and life. We oppose its use because we have the most undoubted assurance that we do possess safe, reliable, and harmless agents, which will fill all indications with more promptness than the mildest mercurial preparations.

OSMOSIS AND ASTHMA.

BY M. E. POPE, M. D.

The May number of the College Journal is one of unusual interest: *First*, from the large number of articles it contains interesting to the practitioner; *second*, for its many valuable suggestions; and *third* for the power contained in the article on Osmosis, to awaken new thoughts and new ideas. And the object of this article is to present to the readers of the Journal the thoughts and ideas that entered my mind on the perusal of that paper.

But why connect the subject of Asthma with Osmosis, I think I hear the reader ask. In what does their affinity consist, and what the resemblance. On reading the article of Dr. Miller on spasmodic Asthma, and that of Dr. Henning on Asthma in general, I was struck with the unison of thought that seemed to prevail in the minds of those individuals upon the subject before them, separated as they possibly may be by a distance of many miles. And the question arose, why this resemblance? why this unanimity of thought. The answer returned, there must be something defective in their observations, their reasoning and their conclusions, else they have followed the teachings of others and have been misled thereby, ignoring as they do the presence of dietetic and climatic influences.

On a careful reperusal I found that the treatment described was wholly of a palliative character, designed to relieve existing paroxysm but not to prevent new ones. That they have been striving to effect a cure without removing the offending cause. Also, that in selecting their remedial agents they had overlooked dietetic and climatic influences. These agents exert a greater influence over this disease and modify it to a greater extent, than any other disease I have met with. In some instances, all that was necessary to give relief was to change the diet, and in others a removal to a different locality. The relief corresponding to their faithfulness in abstaining from their former habits in the one case and confining themselves to the genial clime in the other. I might cite cases in proof, but do not deem it necessary at this time.

Long since, I divided Asthma into the dry, and the moist, and here is where the connection between Osmosis and Asthma commences, the reading of which enabled me as I think, to see the philosophy of my treatment in this disease with a degree of clearness I had not before known. Reasoning both from analogy and practical experiment, that as the effect produced by the inhalation of carbonic acid gas was similar to the effect produced by spasmodic asthma, it follows that that which produced relief in one case would in the other also. In a school-house a few winters ago, the pipe of the stove was accidentally thrown down. The teacher seeing the danger dismissed the pupils and endeavored to restore the pipe to its proper position. In this attempt he necessarily came in contact with the escaping gases from the bitumenous coal which was used, inhaling sufficient to almost deprive him of consciousness. But he happily escaped before he was overpowered. I was called to his assistance, and found him laboring under a severe stricture of the lungs, dyspnœa, a whizzing sound accompanied his breathing, together with a short dry rattling cough. His face was flushed, eyes injected, with agonizing pressure upon the brain. These were the leading symptoms. For treatment, I ordered frequent and copious bathing of the head, neck and chest, drinking freely of diaphoretic teas, inhalation of vapor of water, and to keep the bowels soluble with mild laxatives. Under this treatment he soon experienced relief and in a few days appeared to have fully recovered from the effects of the gas. I have introduced this case not for the purpose of eliciting criticism, but for the purpose of illustrating a point.

In the first place, this individual's lungs were surcharged with carbonic acid gas, and the question was how to remove it. As I was not "posted up" as to what the books taught in such cases, I was under the necessity of falling back upon reason and the slight chemical knowledge I possessed. That informed me that the great object was to effect a union between the water and the gas to enable the lungs to throw it off. This course of procedure may have been empirical, and I have no doubt it was; in fact I know it was so far as myself was concerned, and my desire is that some one will demonstrate it to be scientific.

Having observed that persons suffering from the dry or spasmodic asthma presented the same general class of symptoms, I was led to observe more closely than ever the influence of the climate as effecting this class of sufferers. From the testimony of many both in New England and the Western States, I discovered that all find that certain localities are more favorable to their health than others; that while comparatively exempt from attacks in those places, they are positively certain of the recurrence of their old malady as soon as they return to their old haunts. These facts led to further investigations as to the cause of these phenomena.

Sometimes the change was from one end of the town to its opposite; sometimes from a higher to a lower level; others would require removal to a greater distance; showing that climatic influences affected different individuals afflicted with the same disease in different degrees. But there was one general uniform fact, viz., that a moist atmosphere was most congenial to those afflicted with this form of the disease. Not a wet, heavy atmosphere, but moist in contradistinction to dry.

Evidently at the time of the paroxysm the lungs are surcharged with carbonic acid gas, which has been accumulating during the remission. And here it is that osmosis comes in to solve the difficulty and to remove the obstacles to a clear understanding of the question. And let me remark, I am not attempting to solve the primary cause of the difficulty; that being without doubt organic; but to suggest a new method of relief, and if I can accomplish this I have my reward. In an individual afflicted with spasmodic asthma there is undoubtedly an undue dryness of the mucous membrane of the lungs, and this dryness prevents the escape, or osmosis, of the gas as fast as it accumulates. Hence it is that relief from a paroxysm is so often obtained by inhaling vaporized water. The particles of suspended water are brought in contact with the lining of the air cells, moistening them, receiving the accumulated gas, when it is expelled. This is the simple operation. Osmosis is the active agent in bringing them into contact.

The relief of the moist description of asthma will require, as all will perceive, an opposite course of treatment. As there is already an excess of moisture in the lungs, something must be done to remove that excess. In this case there being an excess of moisture, the gas becomes hydrated, and instead of being expelled, is deposited in, and chokes up the air cells. This will account for the relief smoking gives to those afflicted with this description of diseases. The smoke entering the air cells absorbs a portion of the moisture and enables the lungs to expel the rest. Hence a dry atmosphere should be selected for this class of invalids.

I have extended this article to much greater length than I intended, but I could not see how I could stop before going over the ground I have to illustrate the point I desired. In advancing these ideas I do not wish to be understood as setting up my dictum against that of others, but to elicit from the profession their experience in climatic influences, not only on these but on all other diseases.

APOPLEXY.

BY PROF. WM. BYRD POWELL.

It is not my purpose to give an essay on this form of disease, but simply the details of a case.

About twenty years since a distinguished legal gentleman called on me for my phrenological opinion of himself. His constitution was encephalo-sanguine bilious, the first element greatly predominating. From this cerebral condition, as might be inferred, his brain was large, the hemispheres of the cerebellum and base of the brain generally but feebly developed, his person tall and slender, his muscles flaccid and feeble, his arterial and pulmonary functions feebly manifested. It must be remembered that in proportion to the developement of the cerebral hemispheres would be that of his venous system.

My opinion was required to be in writing and accordingly it was so given. Among other matters I informed him that if length of days were desired by him, he must live temperately especially in feeding and drinking, and when recovering from a drunken debauch he must positively avoid hearty feeding, otherwise he would probably be stricken down by apoplexy.

He showed my opinion to his medical friends, one of whom was one of the best posted the profession contained. They assured him that though I was no doubt a well informed and able phrenologist it was nevertheless very evident that I was not a physiologist, and as I suppose, in proof of the accuracy of this opinion they assured him that the history of the profession had not furnished an instance of a man of his organization having had apoplexy. Under the supposition that all possible forms of human disease had been observed and reported, their decision may be received perhaps as worthy of acceptation. The truth is, it was not my opinion at the time I examined the head of my patron that he was liable to apoplexy of the common or ordinary form; his contracted thorax, long and slender neck, and his large brain contraindicated any such liability, but at the time I was meditating upon the results that might be expected from such a cerebral organization. I conconceived it to be not only possible but even very probable that under the agency of such cases as I specified he was in danger of apoplexy of a nervous character. Within thirty days of the time of giving my opinion he died of apoplexy, thus giving another illustration of the fact, that doctors will differ.

Shortly after obtaining my opinion he visited a neighboring town for the practice of his profession, and having more confidence in the opinion of his medical friends than he had in mine, he ventured to get drunk and thus continued for several days. Then he began to sober off, preparatory to a return home. Upon arriving home he was thought to be quite sober, and took a hearty supper of pickled oysters, cucumbers, bacon, ham, etc., and on the following morning when he rose from his bed he was struck with apoplexy and fell to the floor, and in a few hours died.

The medical friends of this gentleman were greatly surprised when called to attend their friend in a paroxysm of apoplexy. And in their estimate of my physiological abilities they went to the other extreme, as far above the truth as they were at first below it. When I examined his head I had a conception of his liability to a nervous form of apoplexy ; and now I say that this conception must have been very strong and my then rationale of it must have been much more satisfactory to me than it now is, to have enabled me to venture the opinion I gave. It injured me at the time several hundred dollars, but after the verification of it, even to the details, it produced a reaction that compensated for the previous injury. To say the least it was a remarkable coincidence. Any gentleman will oblige me very much by giving me his opinion as to the rationale in the premises.

GLEET.

BY THEODORE C. MILLER, M. D.

Recent investigations into the nature of this disease, and particularly the favorable results I have obtained from the tincture of Gelseminum in its treatment, have convinced me that it is, *per se* neither more nor less than a "hyperæmia" of the vessels involved.

If it was not a local hyperæmia the gelseminum would exert no beneficial effect on the disease. I doubt very much if gelseminum will *cure* gleet in the majority of cases, but it removes the passive state of the vessels, and thus lays a foundation for the successful application of other remedies. The main idea of cure, is, not to depress the system, but to strengthen it. All depletions, purgings, large doses of balsam of copaiba, cubebs, etc., instead of improving the strength of the system, weaken it. This exhausting treatment is always harmful.

The causes of gleet are not only local but also constitutional, and we should never loose sight of this fact ; and any exhausting mode of medication or diet is extremely prejudicial to the patient.

Gleet will be removed without any specific medicine when the general health is restored. I am fully convinced of this. But when called upon we can aid patients who have previously suffered from quacks, charlatans, and routine practitioners. We often may rely on a mild strengthening course of treatment. In some cases it will be necessary to use injections, but they should be of the mildest kind. To irritate a part already irritated is folly, and neither scientific nor practically useful. Under bad management gleet is very sure to terminate in stricture to the very great injury and inconvenience of the patient.

The judicious use of the tincture of gelseminum removes the hyperæmia and allows the disease to be removed by other agents. I am not able to give a plan which would be adapted to every case, for in each which I have treated I have been obliged to resort to a variety of measures, but the basis of them all has been the idea of strengthening the system.

After the administration of the tincture of gelseminum, I generally give Rademacher's acetous tincture of iron in doses of fifteen drops four times a day, and with it I also often combined a tincture of chinoidine. I also use a combination of the sulphate of quinia with the prussiate of iron. The muriated tincture of iron is too energetic to be used in most cases.

I transcribe some formulæ which I have found useful in various forms of the disease.

℞. Zinc, Sulph., grs. xx.
Quinia, Sulph.,
Ext. Sweet Flag, āā ʒjss.
Sweet Flag, powd., q. s. M.

From the mass make one hundred pills, and take eight pills at three or four doses.

℞. Ferro-cyanide of Iron, ʒj.
Quinia, Sulph.,
Ext. Scutellaria, āā ʒjss.
Marsh Mallow, powd. q. s. M.

Form one hundred pills, and take eight at three or four doses.

℞. Iron, Sulph.,
Kino, powd.,
Quinia, Sulph., āā ʒjss
Ext. Uva ursi, q. s. M.

Make ninety pills, and take four, three times daily.

℞. Rademacher's Tr. of Iron, f℥j.
Copaiba, f℥ss. M-

The dose of this mixture is thirty drops, three or four times a day. It must be well mixed by shaking, before taken.

℞. Etherial oil of Cubebs, f℥j.
Acetic Tinct. of Iron, f℥iij. M,

The dose is thirty drops three or four times daily.

As an injection I commonly use a grain of the sulphate of zinc to two ounces of distilled water; or one drop of nitric acid to an ounce of water.

THE CEREBRAL CIRCULATION.

BY PROF. WM. BYRD POWELL.

It has been estimated that the one-fifth part of all the blood circulated in the human system is sent to the brain. This fact is sufficient to authorize the inference that the office of the brain in the human economy must be in its character exceedingly important, too much so to excuse the toleration of any great error in reference to its circulation, and it is of this character that we regard a very prevalent theory, namely: That the quantity of blood in the brain never varies, that it is an invariable quantity; the same both in health and disease, in life and in death. And we are informed by Dr. S. Solly, in his very valuable work on the human brain, that Dr. Monro second, of Edinburgh, is considered to be the first who propounded this doctrine. He taught that the cranium was a perfectly air tight sphere preventing the influences of atmospheric pressure upon the brain; and that he used to illustrate this view of the subject by holding a glass globe before the class filled with water, and he would invert it to show that not a drop of water would escape. Whether this doctrine be true or false, and though ably and extensively inculcated, I think that its influence on the professional mind has been exceedingly limited, and for the reason that it is directly opposed to the popular conviction, which had resulted from *a priori* reasonings and experienced sensations which have almost the influence of consciousness in producing the conviction that the cerebral circulation offered no important exception to that obtaining in all of the other organs of the body.

When the Monro doctrine first attracted my attention it caused me to reflect thus: Admitting the brain to be a vital apparatus and to perform an important class of functions, the conviction is irrisistibly forced upon me that the amount of blood necessary to the brain in its usual state of being would not be adequate to its functions under exciting and responsible influences. This single reflection caused me physiologically to regard the Monro theory as false; and that furthermore if the cranium were the air-tight sphere as contended for by the profession, then some other provision must exist to place the cerebral circulation upon an equality with that of the other viscera of the body; for my physiological reasoning had brought me to the conviction that it was impossible that the cerebral quantity of blood could be an invariable one.

Whilst encamped in the mountains and forests of Arkansas for the restoration of my health I had leisure and opportunity enough to test the question, and I did so. Opossums were plenty and I caught many of them, and when idle about the camp and wanting amusement I experimented, but only for my own satisfaction. I killed Opossums by hæmorrhage from the jugular veins and carotid arteries, and sometimes by cutting off the head, just as the notion struck me at the moment. Sometimes I left them lying on the ground and sometimes fastened them by the ears to the branch of a tree, and after the lapse of fifteen or twenty hours, (in this matter I was never very particular as to the time,) in all of this class of my experiments I found the sinuses, the vessels of the brain, and its membranes more or less exsanguined. The degree of this condition seemed to have been governed by the perfection of the experiment, but in every instance I had ample evidence that the quantity of the cerebral blood had been reduced. In about an equal number of instances I killed the opossums by strangulation by drawing a cord tightly around the neck. In all of these cases I found turgescence or engorgment of the sinues and vessels of the brain and its membranes. By this procedure it was not long before I ceased to have a doubt as to the erroneousness of the Monro theory. I found it to be—as I have all the theories I ever investigated, unsustained by nature. I had occasionally the results of experiments above cited if possible rather more than confirmed by the examination of the brains of deer that died of hœmorrhage whilst running after being shot. Cases of this kind presented the most complete depletion.

For anything that I know to the contrary, the cranium may be, as represented by Dr. Monro, a perfectly air-tight sphere; but if it be, then as before suggested, some other provision obtains for the advantage of the cerebral circulation. When I made the experiments my only motive was my own conviction on the subject, therefore I made no notes of them; but my negligence at the time has been more than compensated for by Dr. Burrows in his admirable work entitled, briefly, "Burrows on the cerebral circulation." I commend this book to the perusal of every student of medicine. Dr. Abercrombie was an advocate of the Monro theory, yet I have not learned that he ever instituted any experiments to sustain it, but rested his opinion on the experiments of Dr. Kelly, and in so doing he did him much injustice; because Dr. Burrows' analysis of Dr. Kelly's experiments discovers that they give no support to the theory in question. Dr. Burrows says that he repeated the experiments of Dr. Kelly but did not obtain precisely the same results. Then to settle the question for himself he went to work as I did, except that he conducted his experiments with more care. He says: "I killed two full-grown rabbits, one by opening the jugular vein and carotid artery on one side of the throat; the other was strangled. Both died convulsed." He drew a ligature tightly around the neck of the first as soon as it died, to prevent any further escape of blood from the vessels of the head. The rabbits were allowed to remain lying on their sides on a table for twenty-four hours. While the blood was flowing from the first, the conjunctiva was observed to become pallid and the eye-balls to shrink within the sockets. Upon the examination of the head, the integuments and muscles appeared blanched; and upon removing the upper portions of the cranium the membranes of the brain were found pallid and scarcely a trace of a blood-vessel was to be detected on the surface of the brain. The longitudinal and lateral sinuses were nearly empty of blood. Upon making sections of the brain the interior appeared equally exsanguined. Soon after the cord was drawn tightly around the throat of the other rabbit, the conjunctival vessels became congested, the eye-balls tinged, prominent, and even projecting beyond the margin of their sockets. The integuments and muscles of the head were full of blood. Upon opening the cranium, the superficial veins of the membranes as well as the sinues were full of dark liquid blood. The whole substance of this brain and its membranes appeared of a dark reddish hue, as if stained by extravasation. The contrast between the two brains in point of vascularity both on the surface and in the interior was most striking. In the one scarcely the trace of a blood-vessel was to be seen; in the other every vessel was turged with blood.

Dr. Burrows adds: "It seems hardly necessary to bring forward further evidence to prove that death by hæmorrhage has a most decided effect in depleting the vessels and reducing the quantity of blood within, as well as upon the outside of the cranium." And upon the other side of the question the writer will add, though the inference is plain from the experiment of Dr. Burrows, that death by strangulation has a most decided effect in congesting the vessels and augmenting the quantity of blood within, as well as upon the outside of the cranium.

Dr. Burrows adds: "A valuable document recently published by Dr. Webster sheds much additional light on the relative states of congestion of the cerebral vessels in a large number of patients suffering from affections of the brain; and on the effects of hæmorrhage on the cerebral vessels. The document I refer to is a tabular synopsis of the principal pathological appearances met with in seventy-two insane patients examined at Bethlem Hospital by Mr. Lawrence the distinguished anatomist and surgeon to that institution. In fifty-three out of the seventy-two cases examined, the vessels of the brain were found congested, sometimes they were turged. Upon one occasion Mr. Lawrence reported that he had never seen the blood-vessels of the brain and its membranes more injected with blood. Among the whole number, the cerebral vessels were found exsanguined—universally empty—only once; and in this case death was caused by hæmorrhage from the bursting of a femoral aneurism three days prior to the fatal event.

When we learn that in the autopses of seventy-two insane patients the cerebral vessels were found unusually empty but once, and that this patient bled to death from the bursting of an aneurism, can we give credence to the statement that the quantity of blood in the cerebral vessels is always nearly the same? or that artificial obstruction of blood does not diminish the actual quantity in the cerebral vessels?

It is not therefore a fallacy to assert as some suppose, that bleeding diminishes the actual quantity of blood in the cerebral vessels.

By the abstraction of blood we not only diminish the momentum of blood in the cerebral arteries and the quantity supplied to the brain in a given time, but we actually diminish the quantity of blood in the cereberal vessels, whether the vacuated space be replaced by serum or resiliency of the cerebral substance.

Nor are the uneducated necessarily deceived or mistaken when they say that they have too great a flow of blood to the brain. That the conception of the Monro theory should ever have happened to any one, is beyond the measure of my ability to conceive, and the diffculty is much increased by the fact that many gentlemen of rare intellects adopted the same.

It has been contended that an inequilibrium sometimes obtains in the cerebral circulation between the veins and the arteries; that a depletion of the cerebral arteries may be attended by a repletion of the cerebral veins. This doctrine has been advocated by Doctors Kline, Watson, and Abercrombie. Some time since I ceased to entertain any doubt as to the truth of this doctrine. And further, I have no doubt but that this state of the cerebral circulation happens in those of the sanguine encephalic, billous encephalic, and the sanguine encephalo-billious constitutions much more frequently than any one has ever imagined. For, in these constitutions the nervous system is very extensively developed whilst the arterial system is never developed to anything like a corresponding extent. In all cases of venous apoplexy there is an inequilibrium in the circulation of the kind contended for. The case of apoplexy of which I report through your Journal, I regard as having been of this kind; that is, the fatal congestion obtained in the cerebral veins.

FRACTURES OCCURRING AT THE KNEE.

BY PROF. A. J. HOWE.

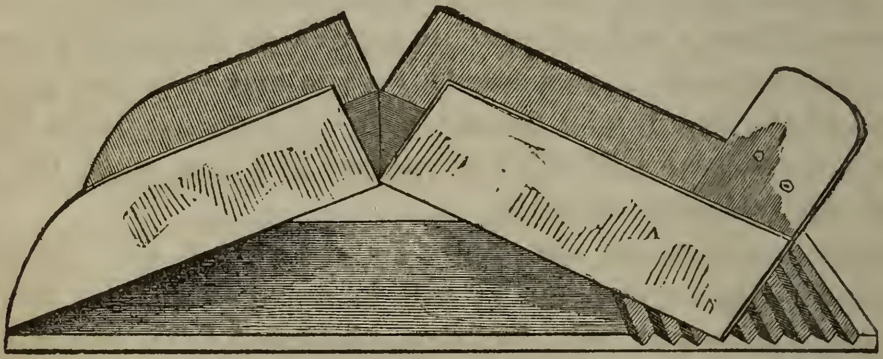
Of the fractured injuries that occur about the knee, is one of the femur above the condyles. It may be transverse or oblique,—a circumstance accidental in its character, and of less importance than is generally attributed to it by the ordinary practitioner;—and be produced by violence directly or mechanically applied, or by muscular contraction. The powerful gastrocnemius muscle acts over the projecting condyles of the femur with the advantage of force applied to the long arm of a lever, and may effect a fracture at a time when the leg is suddenly and violently extended.

Symptoms.—These are sufficiently marked in any case for an easy recognition of the injury. There will be apparent angular deformity and shortening, besides pain, swelling, and most of the accompanying signs of fractured injuries. If the leg which will be found partially flexed, is seized and moved, the motion will be perceived to take place at the point of fracture as well as at the joint, and more or less angular deformity can be produced. The broken end of the lower fragment will be found drawn into the popliteal space by the gastrocnemius. To elicit crepitation in most cases will be found difficult, the fragments slip by one another, and the muscular tension is too great to be overcome by ordinary means.

Treatment—The muscular contraction will afford serious obstacles to the adjustment of the fragments. And extending and counter-extending forces applied at the ankle and thigh will not act in a direction favorable to reduction. The extending force should be applied just below the knee, upon the *flexed* leg. And the relaxing effect of chloroform will be needed when much displacement follows the injury. Cases have occurred to adjust which the surgeons have been obliged to cut through the soft tissues and resect the ends of the bones before reduction could be effected. Instances of this kind, however, must be rare, if the foregoing suggestions be carried out in attempts at adjustment.

The dressing suitable for a fracture of the femur just above the condyles consists in bandaging the limb from the toes to the upper part of the thigh, to prevent capillary congestion, œdema, spasm of the muscles, and too great mobility. If the limb is inclined to shortening from overlapping of the fragments, it should be put into some apparatus that will permit of slight flexion at the knee, and secure permanent extension and counter-extension. Such an apparatus is liable to produce irritation at the perineum and heel unless it be a very proper one and applied with care. Sometimes the common fracture-box, hinged at the knee to render it susceptible of double inclination, will fulfil every incdication.

Any carpenter can make such a box from thin boards, after seeing the following diagram.



A quilt having been folded and laid in the box, the limb may be placed upon it. The weight of the limb inclining in one direction and the body in the other, will bring to bear some extending and counter-extending forces. And these may be increased by attaching the leg to the foot-piece of the box by means of a false gaiter, and then fastening a weight to a strap that may extend from this over the foot-round of the bed. The weight of a common brick attached in the way above described, or to adhesive strips stuck to the sides of the leg and extending through the holes in the foot-piece of the fracture-box—will generally effect all the extension that may be needed. To prevent the patient from gradually sliding down in the bed, being acted on by the weight attached to the fracture-box, the foot of the bed may be raised by putting blocks under the posts, and elevating the head and body of the patient to a corresponding angle by means of pillows. This method of producing extension is due to Dr. Van Ingen of this city

Junk compresses, made of common muslin cloth, like long sacks, and filled with bran, form good cushions to lay in the box on each side of the limb. The side pieces of the box being hinged to the parts they are in connection with, may then be tied with tapes, or buckled against the junk cushions. Other splints, as McIntyre's, or any modification of his, answer as good a purpose. The indications in the treatment are to hold the limb steady, as there is considerable danger of false-joint after a fracture just above the condyles, and to obviate any shortening. The roller bandage must be laid on lightly for the first four or five days to avoid the common evils of a too tight dressing.

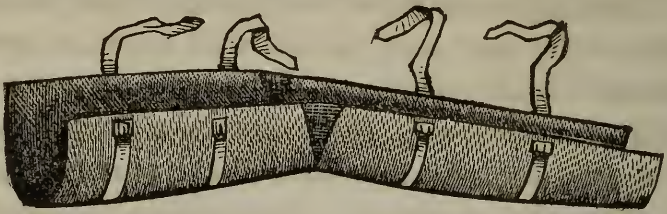
With ordinary care for a few weeks a useful limb may be expected. It is a fracture that has little to do with the knee-joint, yet it has been mistaken for dislocation and for fracture through the condyles, and on that account is spoken of as one of the injuries incident to that articulation.

LONGITUDINAL FRACTURE THROUGH THE CONDYLES.—This is a bony lesion involving the articulation, and unless it is managed well may result in ankylosis, or a condition that may demand amputation. The fracture begins in the deep sulcus between the condyles and runs upwards and outwards or inwards, chipping off a wedge-shaped piece of bone including a condoyle. The injury may be produced by violence directly applied, or by a fall, the force being transmitted from the foot along the tibia to the part that yields. Even the patella, being wedge-shaped, and lying between the condyles, may split them apart when much force is applied to it.

Symptoms.—The injury is attended with a severe nervous shock, with pain, swelling, and increase in the width of the joint. Crepitation can be elicited by rotating the limb. There will be no angular deformity as a general thing, nor shortening, as the head of the tibia rests against the sound condyle. The broken condyle can be moved with the thumb and finger when the other parts lie at rest.

Treatment.—Such an injury must be treated with agents that tend to subdue inflammatory action, and the limb kept in a state of absolute rest. Treatment is sometimes needed to restore the patient from the shock and check any constitutional fever that may follow. Locally, evaporants and anodynes must be in constant use.

Any extending or counter-extending apparatus will be badly borne, and in most cases is not demanded. To hold the parts steadily in place, a wire splint should be used. This may extend eight inches above and below the knee and enclose about two thirds of the limb. It should be bent to a slight angle in the middle to accommodate itself to the flexion the limb will take after the injury. The apparatus like this figured in the diagram



can be constructed by almost any one having the material to make it of. Surgical instrument makers now keep on hand and make to order woven wire splints for the treatment of fractures, and the apparatus seems eminently adapted to the management of compound fractures and injuries and diseases of the joints. A splint like the above is made by cutting from wire gauze with heavy shears a piece large enough for the purpose, which may be previously determined by useing a pattern of cloth or paper. The piece should be incised to the depth of three or four inches on each side, to allow of its being bent to the requisite angle without puckering. The rough edges are then to be turned over with nippers, and soldered. Straps are then to be fastened to it, and the splint is ready for use. Before the limb is placed in it, a piece of cloth or lint should be folded and laid in its concavity. The apparatus is easily applied, steady in its action without being stiff, and above all, keeps the limb cool by allowing of free ventilation and evaporation. It is found by experience that a slightly flexed state of the leg is a better position for the limb during treatment than the extended. Mr. Cooper, whose opinions once were authority in fractures and dislocations, but are now of little influence, prefers the extended position of the limb during treatment, at the same time he alludes to ankylosis as a common termination of the injury. If there be danger of ankylosis, as undoubtedly there is, would it not be better for the patient to have the limb slightly flexed in its fixed state? All are aware that ankylosis at the knee with the limb straight causes a very unseemly and laborious gait.

At the end of about three weeks passive motion is to be practised at each dressing. To begin it before that time would interfere with the organization of the material thrown out for the repair of the injury. There is no bony matter deposited until about the end of the third week, consequently no true ankylosis could be taking place. Passive motion begun as early as is recommended by most surgical writers must do a great deal of mischief. From their rules it may reasonably be inferred that their knowledge of the process of repair in fractured injuries must have been limited and of an unreliable character.

After four or five weeks from the reception of the injury, or when union has completely taken place, if there be stiffness in the joint gradual and prolonged flexion and extension should be practiced several times a day, to obviate true ankylosis. Much may be accomplished in this way at a period when the unpracticed in such matters might be led to suppose that any further efforts must prove fruitless. Stimulating lotions, and the friction used in applying them, serve to excite an absorbent action wihch relieves the accumulation of fluids that impede motion.

Fractures of the Patella.—The patella from its exposed position and anatomical relations is somewhat liable to be broken. Fractures of this bone are commonly transverse, yet they may be longitudinal or stellated. The latter are produced by direct violence, while the former yield from muscular contraction when the knee is bent. The lesion is sometimes described as taking place when the limb is in the extended state, muscular contraction being great enough to separate the patella into halves. But a moment's consideration of the relations of this bone in the quadriceps tendon, will convince any one of the absurdity of such a notion. When the knee is bent, the lower end of the patella is held down by the *ligament* or tendon that extends from it to the tubercle of the tibia, its middle rests on the femur between the condyles, and the upper end is acted upon by the rectus muscle, which exerting its force at right angles to the bone, produces a fracture of it transversely. The injury occurs oftenest as a person alights after leaping to a distance, or from a height. The body being let suddenly down into a squatting position, the bone then breaks from the muscular traction brought to bear upon it at right angles.

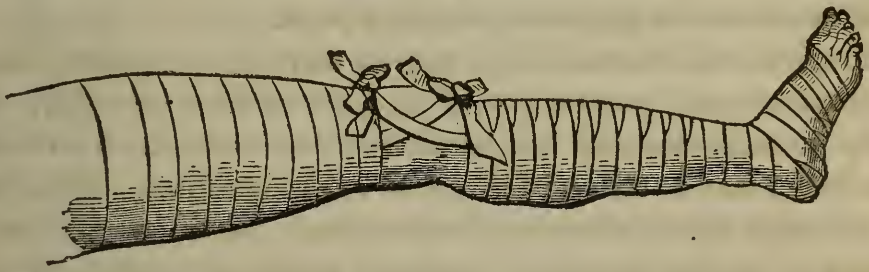
Symptoms.—In connection with the circumstances of the patient's having heard the snap at the time the bone gave way, and that pain and swelling immediately succeeded, with inability to extend the limb, there will be perceived a separation between the fragments on account of the upper one being drawn up and away from the other by the rectus muscle. The separation may be slight, or to the extent of three or four inches, depending upon the amount of laceration of the tendinous fibres that enclose the bone. Generally the separation is sufficient to allow the finger to be passed in between the fragments as far as the integuments will permit. By flexing the leg the upper fragment will be drawn away from the other, and will be moveable, the bone ordinarily being fixed when the leg is flexed. The effusions may render most of the above symptoms obscure, yet with care they can all be brought out. No crepitus can be elicited, as the fragments are drawn too far apart to be made to grate against each other.

Bony union does not commonly occur after this injury, yet it will occasionally take place, especially if the fragments are made to lie in contact with each other for a number of weeks. The union is generally by fibrous tissue, and the greater the length of it the less power will the extensor muscles have. As ossific union has occurred in many well authenticated cases, it is the duty of the surgeon to keep the fragments as well approximated as possible in order to afford every facility for a termination so desirable. And if attempts at osseous union fail the ligamentous connection will be so short that the function of the limb can not be greatly impaired.

Treatment.—From what has already been said it will be inferred that the dressing for a fractured patella ought to be such as will bring the fragments into close apposition and retain them there. To this end various plans have been devised, the most practical of which will be given somewhat in detail. The first indication in the treatment most assuredly is, to contend against or arrest a high grade of inflammation. The limb should be placed in the extended position and the body raised into nearly a sitting posture, to relax the rectus femoris muscle. For five or six days cooling and anodyne lotions should be kept constantly applied. No circular or compressing dressing would be admissable during this time. Fractures extending into articulations will not bear a retentive dressing until the acute inflammatory symtoms have passed. When the skin is not abraded, a solution of the cyanuret of potassium, four drachms to the pint of water, may be used to wet cloths laid upon the knee. That no mischief may result from an improper use of this agent, the patient or the one using it, should be made acquainted with its poisonous qualities. As a local sedative and antiphlogistic, this remedy is valuable ; and it is believed too often neglected on account of its dangerous character when taken in large doses. And it is to be hoped that this notice of the agent may lead the readers of the Journal to employ it frequently as a lotion in cases of high inflammatory action, if the skin when it is applied be not broken. I have used it much stronger than is recommended above, always with desirable effects, and never perceived any mischief from too great absorption of its poisonous qualities.

After the inflammation and swelling have begun to subside, a retentive dressing like that represented in the diagram may be used.

Carry a circular bandage from the toes to the knee, binding two strips of uniting bandage on each side of the leg. Then with another roller begining at the upper part of the thigh, cover that part of the limb while an assistant pulls down upon the quadriceps muscle at the time the bandage is run on. This takes the contractility out of the muscles, and approximates the fragments. Two strips of cloth are to be laid upon the sides of the thigh, and covered by the spiral bandage, as was done below the knee. The uniting bandages are to be tied over the patella by crossing them as represented in the diagram, a compress being placed where the knots rests. Finally, a compress is to be placed upon the patella and a third circular retentive bandage run around the space between the other two, to prevent either fragment from projecting and to secure equal pressure the whole length of the limb. This is all that will be needed in treating a patella fractured transversely, though it may be held still more steadily by adding to the dressing just described a long splint placed upon the posterior aspect of the leg, and binding it there with a roller bandage that will extend the whole length of the limb, giving it a few figure-of-eight turns at the knee. The limb is then to be elevated and kept so for four weeks. As it is redressed from time to time care must be taken that the limb be not flexed, as the upper fragment would be dragged away from the other, a circumstance that would greatly interfere with osseous union. Passive motion is not to be practised too early. About the end of the fourth week it may be began, and kept up until the normal mobility of the joint is established.



Another dressing that has been instrumental in effecting pretty good cures is that of adhesive strips. Pieces of sticking-plaster a foot in length and less than an inch in width, are applied obliquely over the fragments, beginning with one at the head of the fibula and extending it to a point below the head of the tibia on the opposite side, crossing above the upper fragment. Another strip is started from one condyle of the femur and passed around below the patella to the other. The entire knee is covered with strips in this way, and the whole limb from the foot to the upper part of the thigh is then enclosed in a roller bandage. The dressing is finished by placing the limb on a pillow and elevating it on a single inclined plane.

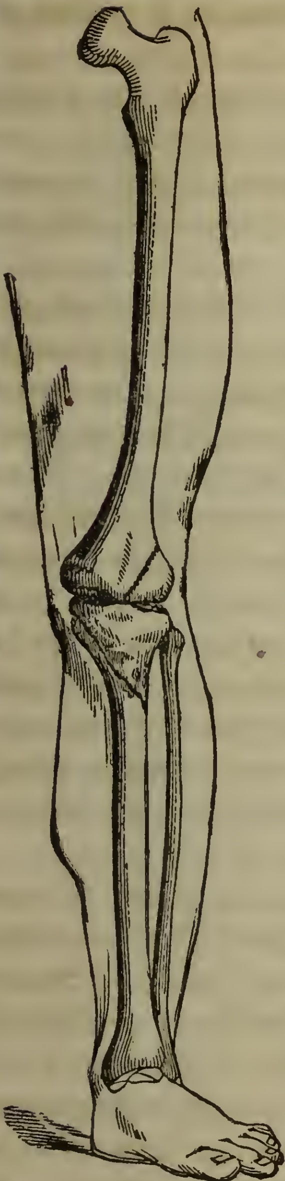
Some years since M. Malgaigne, introduced to the profession a novel way of treating fractures of the patella. It consists in fastening hooks into the tendon above and below the fragments, and approximating them with a thumb-screw. It is an effectual method of bringing the fragments together and retaining them there, but the cruelty of fastening hooks into the flesh and leaving them in for weeks, is too shocking for American practice. The hooks are likely to excite spasm of the muscles, ulceration of the integuments, and erysipelas.

In longitudinal fracture of the patella there is no danger of displacement from muscular contraction, if the limb be kept extended. Consequently no other dressing will be needed than compresses on each side of the bone, and a roller bandage to cover the limb. This dressing with absolute rest, will secure bony union. Stellated and compound fractures of the patella are to be treated according to the condition of each case, the principles involved in the dressings just described being kept in view.

FRACTURE OF THE TIBIA THROUGH ITS HEAD.—This is an injury of uncommon occurrence but may be produced by the concussion of a fall upon the foot, or by violence directly applied. The fracture may be transverse, merely separating the epiphysis of the bone; or beginning an inch or two below the joint, may run obliquely upwards into the articulation.

The symptoms are those usually attending a fracture, and the diagnosis is not difficult to make out, though some forms of the injury may appear like a dislocation. Sometimes one of the condyles of the femur may be broken in connection with the head of the tibia. A case of this kind is represented in the accompanying diagram which was taken from a drawing made by Dr. Van Ingen, a gentleman of considerable surgical acumen, to represent a case that occurred in his practice.

The *treatment* of fracture of the head of the tibia consists in adjusting the fragments, placing the limb in a wire splint, contending against a high grade of inflammation, and managing it in every respect as has been detailed for fracture of the condyles of the femur. Ossific union may in every case be expected, though there be danger that the synovia of the joint insinuate itself between the fragments. But the idea that the synovial fluid interferes with the union of fractures about joints is pretty much abandoned. If synovia obviated bony



union, a fibrous connection between the condyles of the humerus and femur after fracture might be expected. On the contrary no such union is ever observed, the condyles always uniting by osseous deposits.

There is another antiquated notion concerning fractures about a joint, that great danger is to be apprehended from irregular growths of bone upon the articular surfaces; but no such thing occurs if the inflammation does not run so high as to destroy the articular cartilages and membranes. Often after a fracture, irregular growths of bone are developed outside of the articulation which may impede the action of the muscles and tendons, yet they are beyond the facets of the joint. A rule of practice has arisen from this error, so that in fractures of the patella and olecranon process, passive motion is instituted to obviate what would never occur, if, as has been said, the articulating tissues be not changed or destroyed by inflammatory action. Hence in treating fractures about the joints, for the first few days the attention of the surgeon should be turned to the subjugation of the inflammation, instead of to any retentive apparatus. The practitioner who takes the responsibility of a fracture should not be influenced by a patient blind to his own welfare, demanding the application of splints and bandages at a time when such traps would be positively injurious.

ABSORBENTS AND ABSORPTION.

BY PROF. T. E. ST. JOHN.

The universality of the function of absorption throughout all organized bodies, is known and admitted by all observers. It is the process by which they live and grow; the power they possess of appropriating the new material that is presented to them out of the body, and making it a portion of themselves; and for the perfect continuence of this action, all their tissues are porous to a greater or less extent.

If the hand, for instance, be held for a long time in water, the cuticle will become swollen and soft from the large amount of the fluid it has absorbed, and if any soluble salt be added to the water it may be soon detected in distant parts of the body, having been conveyed with the water into the vessels of the body.

It has been ascertained by the experiments of Mr. Erichsen, that different substances require a different period of time to effect a passage through the membranes of the body. He took advantage of a case of extroversion of the bladder, to ascertain how long a time was required for substances introduced into the mouth to appear in the urine. When taken immediately after a meal, a much longer time was required than when taken some hours after eating. Thus he found that prussiate of potassa taken after a fast of eleven hours, appeared in the urine in one minute, but when taken immediately after eating, it required a period of thirty-nine minutes. Citrates and tartrates of soda and potassa were found to make the urine alkaline in from thirty-six to forty-eight minutes. By immersing the feet for some time in water, which held in solution a small quantity of acetate of potassa, the urine became alkaline in sixty-seven minutes.

The process of digestion informs us that substances placed in contact with the alimentary mucous membrane are rapidly absorbed either unchanged or after undergoing a remodeling (so to speak), by the action of the digestive juices. This action however is not confined to substances applied to the skin and mucous membrane; but in a like manner gasses or fluids that may have been deposited in various parts of the body are taken up and carried away, leaving no trace of their troublesome existence behind, save in the memory of the afflicted. In fact one of the essential conditions of life is the speedy removal of the debris of the old and worn out tissues. Life consists in a continual change, an incessent pulling down and building up, and the waste matter is all removed by virtue of the performance of the function of absorption when their particles are no longer fitted for use in the animal economy.

Again, there are instances in which entire organs are removed after their term of usefulness has expired, and their presence is no longer needed; as for instance, the spermatic glands after the aptitude for procreation has been obliterated.

Thus it is readily seen that the function is one of much importance, one which is of interest to us as physicians, from the fact that upon its performance either normally or otherwise, we are to depend for the action of our medicines in removing disease; it is also of interest to us as individuals, for it is the means by which distant organs are made to communicate with each other, forming an unceasing current within the animal, entirely removed from beneath the cognizance of the senses, and indeed it constitutes one of the connecting links that bind us to the outer world. We may in this light view the taking up of any substance, water for instance, by any portion of the body. It flows through the various tissues, serves out its office in the animal economy, is thrown out unchanged through the skin, lungs and kidneys again to be vaporized, floats for a time in the air until it is again taken up by another or the same individual, till

> "Each minutest drop of rain
> That hangeth in the thinnest cloud
> Has flowed through living veins."

Before noticing the function of absorption in detail, I shall give a description of the anatomy of the lymphatic system, a portion of the animal that is particularly interested in the process under consideration.

Lymphatics have been divided into two classes of vessels, owing to their different distribution and the dissimilar fluid that is found floating in them, viz: the lacteals, and lymphatics proper.

If the coats of the intestines be examined they will be found to embrace both these classes of vessels, one containing a milky fluid called chyle; the other is found in the muscular coat of the intestines, and filled with lymph. Besides these, there is another set of vessels, the capillary net-work, which conveys the blood from the arteries to the veins, and although these as well as the lymphatics are agents in absorption, and receive a share of the food directly from the intestines through the mucous lining, yet at present I shall only notice the structure of the latter.

The lacteals which make up that portion of the system that are found to originate in the mucous membrane of the intestines, and are chiefly concerned in the conveyence of certain portions of the food from that point to the thoracic duct. They were first described by Berzelius in 1822, who gave them the significant name of *vasa lacta*, because they were found to contain a peculiar fluid having a milky appearance. These vessels originate in the villi of the intestines by extremely fine rootlets which although visible to the naked eye, are exceedingly difficult to see because of their transparency under ordinary circumstances, and those who have described them have been content to found their description on a few observations; hence very different opinions have been advanced regarding their formation. One original observer tells us that they commence by a single root which occupies the centre of the villus; another, that each villus is filled with a plexus of minute vessels that unite to form one or more efferent vessels, and so on, giving as many different modes of origin as there are observers to examine them.

Now such observations would tend to confound the inquirer instead of elucidating the subject, were it not that it is altogether probable that each of these modes of origin may obtain in different animals, and it is not at all improbable but that upon further examination they may be found to exist in the human subject. Indeed the known dissimilarity of the lymphatic system in different parts of the same animal render it certain that no absolute type is necessary as regards external form, and it is probable that these varieties are advantageous in absorbing different kinds of aliment, and that each may be associated with individual peculiarities of growth or appetite.

Professor Kolliker who is probably our best authority on microscopic anatomy, observes: "In animals, I feel certain that in many cases, only a single lacteal, which has a cœcal, and frequently enlarged end, and whose diameter is much greater than that of the capillaries, traverses the axis of the *villus*. For my own part in fact, I believe that all the narrow cylindrical and filliform villi will be found to present this condition, but that, on the other hand, the number and mode of origin of the lacteals, may possibly be different in the broad and folliaceous forms." The animals adopted for making these investigations were of the ruminant class, particularly the calf, in which the villi may often be seen filled with white chyle.

From this origin the lacteals pass in great numbers between the layers of the mesentery, anastomosing very frequently with each other, and uniting with numerous glandular bodies, the mesenteric glands, on their way to the general point of junction, where they discharge their contents into the receptaculum chyli.

The lymphatics of other regions than the intestines, have usually been considered as arising in the substance of the skin and mucous membrane by means of a plexus somewhat varied in character; but recent observations have demonstrated that they commence partly with free prolongations and in part in net-works. "The lymphatics discovered by me," says Kolliker, "in the tail of the Tadpole, correspond entirely with the blood capillaries, in the occurrence of *nuclei* on the inner side of the very delicate structureless membrane, whilst they differ from them in being furnished with short, jagged processes with prolongations."

They are found in every organ and tissue of the body, however delicate, as may be proven by microscopic examination. In the cornea for instance, they are described by Kolliker, as existing in great numbers. He says: "I have recently observed vessels in the *cornea* of a young cat, which I can scarcely regard as any thing else than lymphatics. In this instance, at the margin of the *cornea* together with the very distinct loops containing blood-corpuscles, there were numerous wider vessels, which either extended singly into the *cornea* to the same distance as the blood-vessels and terminated in dilated clavate ends, or in acuminate points, of two, three, or more together, formed simple loops, from which in like manner other cœcal processes were given off. Notwithstanding their capacity, these vessels presented a delicate, structureless coat, with scattered, oppressed *nuclei*, and contained a clear fluid, in which frequently a few, and occasionally even a good many clear spherical cells, exactly like lymph corpuscles, were visible."

The lymphatic vessels generally form many trunks of equal diameter taking a longitudinal direction, and frequently uniting with each other and again dividing without in the least affecting their size, and in this regard do they differ materially from the blood-vessels. The walls of these vessels are exceedingly delicate and thin, which gives them a degree of transparency by which the contents may be very easily seen, and also makes them difficult of detection when empty.

The lymphatics like the veins are provided with three coats. (1) A proper coat in which is found a considerable quantity of elastic tissue. (2) An outer investment of areolar tissue, the fibres of which take an irregular course, blending loosely with the neighboring tissues, by means of which the movements of the vessels are allowed. In this coat are also found ramifying a great number of blood-vessels which supply the vessel with nutrient fluid. (3) An epithelial lining, described by Henle as consisting of a number of delicate nucleated cells of a spindle shape, and applied sideways to each other.

When these vessels are filled either with their natural contents or with injections, they present a great number of constrictions which give the vessels a peculiar beaded appearance, depending upon the existence of valves in the interior which prevent the retrograde movement of the lymph or chyle. These are mostly disposed in pairs, of a semilunar shape attached with their convex side to the wall of the vessel, the concave being free, and when applied to each other preventing entirely the passage of the contents which being forced into the pouches or sinuses immediately above and behind, give rise to the beaded appearance spoken of.

These valves are most numerous in the vessels of medium size. In the smaller they are at considerable distance apart, while in the largest, as the thoracic ducts they are frequently absent.

The lymphatics of the lower extremeties consisting of the superficial and deep, uniting with each other at the groin, pass beneath Poupart's ligament, accompany the large blood-vessels upwards, and finally empty by from four to six large trunks into the *receptaculum.* From this point the tharocic duct extends upward lying between the aorta and vena azygos, inclining behind the arch of the aorta to the left, it suddenly turns upon itself and empties by one, sometimes two or three mouths, into the left subclavian vein at or near its junction with the jugular vein. The lymphatics of the left side of the body, head and neck, and of the left arm, converge to the thoracic duct as it terminates in the vein. Those of the right side however unite to form a short distinct trunk, which empties into the *right* subclavian vein.

As these vessels pass inwards they traverse numerous flattish, oval bodies of firm consistency and lightish color, called lymphatic glands. They vary in size from $\frac{1}{20}$ to $\frac{3}{4}$ of an inch in diameter. They may be very easily injected with mercury which exhibits them to be composed of an intricate plexus of tubes which are continuent with both the afferent and efferent vessels, as is indicated by the ready passage of the metal from one to the other. By the examinations of Professor Goodsir, it has been ascertained that the outer or areolar coat of the vessels pass to form the capsule of the gland, the proper coat becomes extremely thin, while the epithelial layer thickens in the substance of the gland where it is rendered thick and opaque. He considers this to be in a constant state of renovation and decay, being thrown off into the ducts as a secretion to serve some purpose in the transformation of their contents. These glands are very largely supplied with blood, the small capillaries penetrating into the substance of the gland, anastomosing frequently with each other, forming a net-work of large meshes.

Thus I have examined briefly the anatomy of a system of vessels which it will be seen, are if possible more numerous and extensive than even those of the sanguiferous system, occupying all parts of the body, ramifying in immense numbers in the most delicate structures, containing in their interior a great number of valves all opening in the same direction, traversing in their passage a number of delicately constructed glands, and finally opening into the large veins of the neck, pouring their contents into the blood current just before it is drawn into the lungs; all of which indicate their importance in the animal economy. What is their use? The answer to this will be discussed in the next number of the College Journal.

SIMPLICITY IN PRACTICE.

BY F. R. HARRIS, M. D.

An article in the Decembei number of the College Journal, entitled "Simplicity in practice," is worthy the attention of all practitioners whose object is to do good. It contains valuable truths which are too often overlooked in the general search for things in the medicine chest, and too much befogged by the smoky atmosphere of professional fogyism. This however is not altogether the fault of the profession. It is the general practice of the people to speak contemptuously of their physicians who use simple remedies, with simple terms, and attend to the more important, but often neglected indications. "A real old puss" or a perfect "granny of a doctor;" "will do for babies, and nervous old women, but would'nt answer in severe, or complicated cases."

Such is too much the feeling and expression. And so long as it remains, practitioners will search for compound complexities with unpronounceable names, and have complicated and severe cases manufactured from simple ones. And so long as this kind of practice is upheld by physicians, the people will require it. The proper condition cannot be brought about at once, but physicians must commence the reform and the people will gladly receive it as they become informed. I will give some of my (as yet limited) experience, and offer some additional ideas therewith.

I was called to a child one year old, who had been sick about thirty-two hours. Pulse quick, sharp and frequent, constant pain, almost incessant crying, abdomen swollen, tenderness on pressure, drawing up of the feet, no passage from the bowels although oil and enemata had been administered through the day. The treatment consisted of cold wet compresses, tepid soft water, enemata, tepid water poured in a stream over the abdomen with gentle manipulations, and a little of a pleasant, but inert mixture in a vial to satisfy the peculiar, almost superstitious confidence which people have in that something which the *doctor* pours from a vial, or carries in a box or paper. The child was well too soon for my profit or credit, as I was a new practitioner in a place, and no *sensation* was created in so short a time.

In another case, a wet compress, a sponge-bath, a hot foot-pack, a good rubbing, etc., repeated for a few days, effected (or permitted) a cure, while I, and a cup of little next-to-nothing, received the credit; the patient remarking that "the medicine must be very powerful to relieve her so sensibly and so soon."

During the prevalence of Typhoid fever in our place last fall, I was called to a lady who had been suffering for three weeks with what her attending physician called typhoid fever, and such it undoubtedly was at first, but had become complicated by over-medication and abusive treatment. When I first saw her, the symptoms were as follows:—Tongue heavily coated, dark brown, deeply furrowed and red edges; pulse frequent; feeble, and fluttering, breath hurried and tremulous; slight cough with much irritation and some soreness in the region of the upper left lung; pain in the head with inability to bear the light; constant nausea; fetid breath; pain and soreness in the lumbar and hypogastric regions; cold extremities; nervous restlessness and depression. I found her in a small bed-room, darkened and rendered as nearly air-tight as could be, on a feather-bed with covering enough to weary a strong man with their weight, and the skin unwashed and fetid with diseased and confined exhalations. A small table near the head of the bed with a bowl of sloppy gruel and sundry vials and papers, as is usual in such cases, with directions for doses, which with the attending circumstances would readily account for the condition of the suffering victim. She had been kept under the influences of medicine until she wholly refused to swallow another dose when a neighbor recommended to try the "new doctor," and straightway I was called. I considered that the first and most important requirement was to restore to the abused and disordered machinery to the best and most natural conditions for putting itself in running order; for the beautiful, harmonious and perfect machinery of the human system is not like the imperfect mechanism of man's hands, which, when disordered and broken by clogs and obstacles, requires not only that those clogs and obstacles be removed, but that the broken and disordered parts be mended and repaired before the machinery can perform its functions.

The vital machinery possesses within itself recuperative powers by which, when the proper conditions are restored, it will resume its natural functions, by the performance of which it gradually restores and mends itself. In the case under consideration I ordered a tepid bath of soft water and soap, with gentle but thorough friction. I had her removed to a straw bed, reduced the covering to just enough for comfort, opened the doors, not only into the next room, but clear out to the free, pure air of heaven; gave her pure water to drink, put a cold wet compress on her aching head, a tepid wet bandage around the body, and enveloped the feet in hot wet flannels, closely covered with dry ones to retain the heat. I left her at nine o'clock in the evening, somewhat tired from the unusual exercise but learned next morning that she had slept better than any night during her illness. I accustomed her gradually to the light, repeated the baths and compresses, ordered the upper sash of the window to be lowered two inches, (as I observed her attendants were quite inclined still to keep her room too close,) and that it be not closed on any condition except that the wind should change and the storm beat directly upon her. This kind of treatment was kept up, with such varieties as the symptoms indicated. The recovery was gradual but continual from hour to hour and from day to day, until the tenth day I dismissed the case, as the patient was up and dressed and about the house again. But the cure was not affected without the use of medicine. Oh no, for the patient was not prepared to recover from so severe an illness without medicine after having been so nearly killed with it, nor were her friends prepared to have her; therefore, wishing to try the efficacy of pure *placebo*, I put in a cup a few grains of Hydrastis Canadensis, poured a gill of hot water upon it, disguised it with various aromatics, and putting it in a vial, ordered it to be given in doses of one tea-spoonful every four hours alternating with an inert powder, giving very minute directions for certain variations in case of certain change in symptoms, and enjoining strict obedience to orders with regard to bath, change of compresses, ventilation, diet, etc. A few days after I was called I received a visit from her former physician, who wished to know my opinion, course of treatment, etc., which I frankly gave him. He commended the course, said he had mentioned the necessity of free air, baths, hard-bed, etc., but it had not been heeded. (Query: Had they disregarded the less important directions with regard to medicine, would he have passed it over so lightly?) His reliance was medicine, and in his undue confidence in that he had neglected the more important requirements.

But beside those cases which may need only a restoration of physiological circumstances to favor recovery, there are those which require *medical treatment*, where such a course would be an imposition.

But is complexity of treatment advisable even in such cases? I have been led to consider whether in the generality of cases where several remedies are indicated, it might not be better to administer them separately and at different times according to Homœpathic rules and practices, rather than in combinations. There would be this advantage, at least; we could be better satisfied of the specific action of the various articles used, and better prepared to understand their indications and administer them properly and efficaciously. These crude remarks are sumbitted with the hope of calling out the opinions and experiences of others for the general benefit of those who may read.

AN ODD CASE.

BY M. A. THOMPSON, M. D.

I have met with a case which I think of a *genus* somewhat rare. Mr. F———, a respectable farmer in this neighborhood gave me the history of his case about as follows: Some fifteen years ago without being affected with any peculiar collateral symptoms as he can recollect, he was unable ordinarily to make his food pass into his stomach. It goes down and lodges in the œsophagus, but refuses to pass the cardiac orifice. I asked him if warm food presented any less difficulty than cold. He said, "that he had learned that in order to succeed at all, he is compelled to swallow hot food, or fluid at first, and then take a quantity of cold water which pushes the first into the stomach, but having no ticket of admission itself, the water which had thus served as a ramrod, is entirely belched out. As you may suppose, this process has occasioned long years of agony.

He was at Cincinnati for some time and consulted Dr. Mussey, who probed the œsophagus and pronounced the case "Stricture of the œsophagus," gave him a note prescribing creosote in water, and sent him home, but the physicians here would not take the responsibility to give it, as they said it would injure him.

My diagnosis is, that spasmodic action exists, as well as stricture, and probably it might have been the primary cause of the hypertrophy which occasioned the stricture. That there is spasmodic action of the lower œsophagus I infer from the warm fluid stimulating and relaxing, while the cold water above constringing and lessening the size of the tube, the pharyngeal orifice being closed, the food is forced to pass into the stomach. I am more inclined to pronounce it spasm as he has all along been partially affected with cramps in the limbs and elsewhere.

I told him that good *might probably* result from a long continued use of solvents, absorbents, and a current of electricity passed directly through the affected part, but that he would not be likely to spend the time and exercise the patience and assiduous care requisite to determine to a good result.

What do you think of so odd a case, and what was the meaning of the prescription of the sedative, creosote?

EDITORIAL DEPARTMENT.

THE MEDICAL PROFESSION.

In our endeavor to aid our chosen profession in *obtaining* and *maintaining* the high, moral, scientific, and social position to which we think it should ever aspire, it may be well for us occasionally to look to the past and from that retrospect derive hope and confidence for future progress.

The past position of physicians in the scale of humanity must be very gratifying to contemplate, but if we content ourselves with a position less honorable than that occupied by our predecessors, *their* honor must conduce to *our* shame and degredation.

Every classical scholar will recollect the lines of Homer in his Iliad, which have been translated:

> "A wise physician, skilled our wounds to heal,
> Is more than *armies* to the public weal."

Others, as Xenophon and Vegetius, expressed themselves of the profession in nearly as glowing terms. Hypocrates said: "A philosophical physician is like a god." Pliny and Cicero esteemed medicine as superior to all other professions and occupations; and the latter said: "By nothing are men brought nearer to the gods, than by giving health to their fellow men."

The writer of Ecclesiastes has placed on record:

"Honor a physician for the honor due unto him, for the Lord hath created him.

"Then give place to the physician, for the Lord hath created him; let him not go from thee, for thou hast need of him."

Celsus, Galen, Oribasus, Ætius, and others spoke of their connection with our profession as the highest honor to which men could attain. Even at the present day in the East, the character of Rhazes, Avicenni, Albucasis, and Avenzoar, well-remembered Arabian physicians, are held in deep veneration.

With the ignorance and the superstition of the whole world during the first half of the second thousand years of the Christian era, physicians had degenerated, and those who practiced the healing art were nearly on the low level of the rest of mankind. But for three hundred years our profession has fully kept pace with the progress of humanity, until now, without desiring that admiration too nearly allied to worship which was formerly accorded to those of our profession, we can with truth assert, that all which was said by Homer and others of the profession, is the literal and exact truth in regard to the present.

Hence, Dr. Johnson said: "The profession of medicine has been more distinguished for an enlightened and comprehensive view of the various subjects for reason than any other class of men." Napoleon, as a reason for the pre-eminence which he saw and admitted among physicians, said: "They have opportunities of studying human nature as well as science, not accorded to other men." Rosseau said: "In all countries, they are the most truly learned and useful men." De Quincy said of physicians, in comparison with other classes of society: "They are, by much, the most enlightened." And Montfaucon asserted that "a physician of genius is the most magnificent present that nature can make to the world."

In proof of the accuracy of the statements quoted above, we need but point to the names of those who at present are the foremost men in the ranks of mankind in any and all civilized countries. We do not enumerate them, for among the very many, any selection would seem invidious.

All the sciences owe much, very much, to our profession, even those which are not directly connected with medicine.

Astronomy owes its position as a science, to the physician, Galileo. *Pneumatics* was first treated as a science by Dr. Boyle, who invented the air-pump and the glass prism for decomposing light. The invention of the thermometer is claimed both for him and for Santorinus, another physician. *Galvanism* was the discovery of an Italian physician, *or his wife.* Dr. Wollaston gave the first idea which led to the manufacture of the object glasses of the compound microscope, and which thence led the way to the revelation of the world of the wonders that otherwise would have terminated unknown. He also was the inventor of the *camera lucida.* The science of *meteorology* has always been advanced by the observation of physicians.

Chemistry cannot be named without our minds recalling the discoveries of Drs. Black, Cavendish, Priestly and Lavoisier. Davy discovered many things and invented the safety lamp. Dr. Wollaston invented the scale of chemical Equivalents and the goriometer, as well as discovered two metals and a method of rendering platinum malleable.

In *Natural History*, almost all our knowledge was contributed by physicians. Aristotle was a physician. So was Swammerdam the entemologist. Caius, and William Huston, to both of whom we are indebted, were also medical men. In the department of Botany, nearly all who cultivated it fifty years since were physicians; as Malpighi, Boerhaave, Linnæus, and Sauvages. Ethnology formerly was always associated with the name of Dr. Pritchard. At the present time a host of physicians are doing wonderful service in its cause. Dr. Faust's name will ever be connected with the art of printing.

In *Literature*, physicians have ever shone among the foremost men of their own times. In poetry the sweetest songsters and the most profound thinkers, were of our profession. Haller, Darwin, Armstrong Akenside, Schiller, Zimmerman, and others may be named. Of novelists perhaps Eugene Sue, and Charles Lever, stand nearly alone.

As *Artists*, Sir Charles Bell, John Bell, Eustachius, and Perrault, deserve honorable mention.

In the higher walks of the mind, or as *metaphysicians*, may be mentioned Aristotle, Bacon, Descartes, Berkley, Locke, Sydenham, Hartley, Mackintosh, Brown, and Swedenborg.

If, as has been shown, those of the profession in former times deserved and had awarded them the honor of being among the best, the most useful, the most learned, of mankind, it devolves upon *us* of the present generation to so conduct ourselves in and out of the profession, that while we may with pride point to the past for what physicians *have been*, we may also with confidence refer to the *present* as evidence that we are in no wise disposed to yield up our position in the foremost of the very vanguard of progressive humanity.

While we are giving special attention as properly becomes us, to those sciences which are more intimately connected with our own chosen and noble profession, we will never neglect to keep ourselves well informed in regard to all sciences as they influence humanity; and by our constant endeavors, and unwearying efforts still be able, at all times, to show that our profession is so progressive that at once it comprehends and makes its own all the improvements and discoveries of the world of mind, giving to the world as much or more than is received, and ever maintaining our right to the glorious title of RATIONAL PHYSICIANS.

We cannot maintain the position we have by idleness, or inattention to the present advancement the race is making. While we should look to the past, our gaze should not become so *fixed* thitherward as to neglect the present, or a proper preparation for the future.

Everything in the universe is *progressive*. The barren rocks of the sea-girt Island are soon covered with lichen, which gives place to higher orders of plants, grasses, shrubs, and trees, until it becomes inhabited by men, and the seat of an empire. Worlds progress, and in cycles their course is ever onward and upward. The arts and the sciences are ever advancing farther and farther toward perfection, and the science of medicine is no exception to this universal rule. The profession, too, is ever progressive, and only individuals are at a stand still, serving no good purpose but to stand as *milestones*, showing the progress which is being made beyond them.

But to keep pace with the world's progress we need to be unceasingly active, ever on the alert and wide awake, scanning all things, testing all things, proving all things, and holding fast only to those which are *proved* to be good.

BOOK NOTICES.

The Excito-Secretory System of Nerves, its relations applied to Physiology and Pathology. Prize Essay by HENRY F. CAMPBELL, M. D., Prof. of Anatomy in the Medical College, Georgia.

Essay on the Physiology of the Nervous System, with an appendex on Hydrophobia. By BENJAMIN HASKELL, M. D., Rockfort, Mass.

No period in the history of physiological research has added more to what is known of the nature and functions of the nervous system than the past few years; and we may also add, that with the valuable information and scientific investigation, have been presented a great number of vague hypotheses and wild speculations, in explanation of many actions which we know to take place, that we can observe and describe, but of the true cause of which we are likely to remain ignorant, despite the long and labored arguments of would-be discoverers. Some time since we made a brief notice of the contention among a few physiologists in reference to the honor pertaining to the discovery of a function of the nervous system that had hitherto remained unnoticed.

That there is a most intimate connection between the two systems of nerves, viz: the cerebro-spinal and ganglionic, no intelligent physiologist of the present day will question; a connection not only anatomicaly, but also in function, and although they perform actions in the economy of a very different nature, yet it is equally true that the welfare and life even of the individual depends upon the continuation of their normal and joint action.

The Essay of Dr. Campbell is a valuable contribution to nervous physiology, and whoever may be the *original* discoverer of the excito-secretory action of the nervous system, it is evident that the subject is very far from being exhausted. The ganglionic system of nerves has heretofore been almost entirely overlooked by physiological writers and only vague and unsatisfactory explanations of its nature have been attempted. When we examine the anatomy of the nerves and observe that they preside, as it were, over nearly every action that pertains to the continuation of the life of the individual, the conviction is irresistably forced upon the mind of the thinking man, that their use and importance in the animal economy far exceeds all that has heretofore been ascribed to them. Dr. Campbell says: "We have seen that to the ganglionic system, and to this system alone, are confided all those important and mysterious processes which pertain to nutrition and secretion, or in the words of Bichat, 'those thousand secret operations of a living body.' "

Although a mere continuation of existence may be preserved in man (as is abundantly proved by the phenomena of disease of the brain and spinal-cord,) by the ganglionic system alone, yet, for the perfect performance of all his duties it is necessary that he be provided with an apparatus by which he may maintain his relations with the external world, which is afforded in the cerebro-spinal system of nerves. Dr. Campbell remarks: "This cerebro-spinal has been subdivided into two portions, viz: the nerves of sensation, and those presiding over muscular action. A relation has been discovered to subsist between these portions of the nervous system by virtue of which the sensory nerves have been found to act as excitors to the motory; and hence the system has been termed by Dr. M. Hall as the *excito-motory* system of nerves.

Now, these same sensory nerves are not only excitors to the *motory* system, but, under certain circumstances, most of them sustain an analogous relation to the *secretory* nerves, exciting them and modifying their action, diminishing, increasing, and altering the secretions, according to the extent and character of the excitation applied."

The writer then proceeds to show by numerous experiments and observations at the bedside, that these sensory branches sustain a *double* relation to the other portions of the nervous system; first, as excitors to the motor nerves giving rise to the *excito-motory* system of nerves described by Dr. M. Hall, in 1837; and secondly, as excitors of the secretory nerves, resulting in the *excito-secretory* system. It is a good document and bears the imprint of a master mind.

The Essay of Dr. Haskell contains many valuable facts, but they are so intermingled with wild hypotheses and unwarrantable conclusions, that they appear as particles of precious metal partly concealed amid the rubbish of an ancient ruin. He attempts to prove the absurdity and incorrectness of the present generally received opinions of the performance of the functions of the nervous system, and gives a list of phenomena which he asserts are inexplainable by the present theory of nervous action, but fails in his endeavor to present any hypothesis that can be accounted more successful.

Silver Sutures in Surgery. The Anniversary Discourse before the New York Academy of Medicine. By J. Marion Sims, M. D., Surgeon to the Woman's Hospital.

This discourse of Dr. Sims extending through some seventy pages and illustrated with twenty diagrams, makes a very neat little pamphlet. The speaker endeavors to show that his discovery of the use of Silver for sutures, has done wonders for surgery. Any one out of the profession upon reading the discourse, might be led to suppose that Dr. Sims had done as much for the advancement of practical surgery as all others together; and that the science was in a wretched state of degeneracy before him.

We are glad to learn that Dr. Sims is in many cases abandoning the use of his clamps, shots, awls and other useless lumber that have been so highly lauded by himself and his early followers. They rendered the operation for closing a simple fistula a complicated affair. The plan of Mettauer, of Va., which consists in bringing the freshened edges of a fistulous opening together by twisted metallic interrupted sutures, seems to be gaining favor even with Dr. Sims. The mere substitution of silver for lead is as unimportant a change as Bozeman's button suture was on the clamp of Dr. Sims, which the latter scolds so much about. In most cases lead is as good as silver for sutures, and gold and platinum are better than either. They are more expensive to be sure, but that objection may be raised against silver when compared with lead.

While we would not depreciate the well earned laurels of Dr. Sims, we would have Dr. Mettauer enjoy the credit of having *first* used *metallic sutures* successfully in the treatment of vesico-vaginal fistulas.

Contributions to Operative Surgery, and Surgical Pathology. By J. M. Carnochan, Prof. of Surgery in the New York Medical College, Surgeon-in-chief to the State Emigrants, Hospital, etc. Philadelphia, Lindsey & Blackiston, 1858.

We have received the first of a series of surgical contributions that are now being issued with the above title page. The number before us contains thirty-two quarto pages and two lithographic illustrations.

The entire series which will consist of ten parts, will constitute an interesting work on several difficult and novel operations in surgery. Although a great deal of the matter has already appeared in Medical Journals it will not be less esteemed when brought together in book form. Contributions of this kind do credit to American Surgery.

In the number just issued is detailed an account of the resection of the entire under jaw for necrosis. The operation was perfectly successful, and is the more interesting as being the first well authenticated case on record. The author has given his plan of treating Elephantiasis, which consists in ligating the artery to cut off supplies. Prof. Carnochan has established beyond a doubt the legitimacy of the practice. He has ligated the femoral artery a half dozen times for the cure of elephantiasis of the leg, and there was a healthful result in every instance. Other surgeons have followed his plan, and have had equal success. What once seemed to be a most intractable disease, may now be regarded curable.

The Institutes of Medicine ; by MARTIN PAYNE, A. M., M. D., etc., New York, Harper & Brothers, 1858.

THE author tells us in his preface that he has had no occasion to change in the least his opinions as expressed in the first edition of this work in 1837, and hence it remains substantially the same, but as the microscope and other aids have since then shed so much additional light on all subjects having a bearing upon Physiology and kindred sciences, he has considered it necessary to add an appendix, in which he asserts that all that has been subsequently disclosed is essentially in harmony with all that the author incorporated in the foundation upon which his Institutes are erected, and places them beyond the probability of being much invalidated.

However much we may differ with the author upon some points, we feel it contains a mine of knowledge within itself, and bears the imprint of the close student and original thinker.

The phenomena of the *excito-motory* and *excito-secretory* system of nerves about which there has been so much controversy, are fully and fairly explained in the body of the work, although the author certainly can lay no claim to the *discovery* of the *names* by which those actions are now designated.

We think in commending the book to our readers as one well worthy their perusal that we are conferring upon them a personal favor.

Proceedings of the American Association for the Advancement of Science. Eleventh Meeting, held at Montreal, Canada East, August, 1857.

This volume, containing papers on the various departments of science, happily indicates the progress which is being made in the scientific world, and contains many valuable papers. But the fact that there were *fifty-eight* other papers read to the Association and approved by them, but which were refused to the Association for publication, indicates a want of confidence in the society, which want is more than hinted at in many circles. It is to be hoped, however, that the selfish and exclusive notions which *are supposed* to influence some of its members, will give place to liberal generosity, and future proceedings of the Association be in no way obnoxious to the complaints that have obtained heretofore.

Diseases of Teeth ; paper read before the Cook Co. Medical Society at Chicago, and published by their request. By W. W. Allport, Dentist. Chicago, 1858.

We have been favored by the author with a pamphlet, which we find also published among the *original* communications in the American Journal of Dental Science for April. It is a very creditable production and one deserving the commendation of the Society in ordering its publication. Too little attention is paid by the medical profession, to diseases of the teeth, and diseases in other parts of the system caused by them ; and if physicians would regularly read Dental Journals, and dentists medical ones, it would redound to their own advantage, and the benefit of the public.

Mr. Allport presents strong reasons for additional knowledge and care on the part of physicians, to prevent medicines proving injurious to the teeth, or defective teeth producing injury to other parts of the organism.

Physical education ; An Essay read before the Cumberland County Teachers' Institute. By J. S. Hostetter, at Shippensburgh, Pa., December 1857.

We are more than pleased at this and other evidences that those whose profession leads them to train the intellectual faculties of our youth, are year by year obtaining a clearer insight into the intimate connection between the mind and body—and that a sound body is the only fit instrumentality for the use of a sound and vigorous mental and moral developement.

Although the author does not lay claim to an intimate acquaintance with our profession, he has given publication to an Essay which must benefit all who heard it, or are favored with its perusal.

A Syllabus of Lectures on Materia Medica and Therapeutics. Delivered in the Atlanta Medical College. By J. G. Westmoreland, M. D., 1857.

In the Preface the author says the Syllabus is "not intended to take the place of a regular work on Materia Medica," yet it seems well adapted to "meet the wants of students in attendance upon a course of lectures on Materia Medica and Therapeutics" in the College where the author is professor.

It is, as its title indicates, a *Syllabus* of lectures, and not a course of lectures in full.

With as we conceive, an erroneous Classification and an imperfect nomenclature, such as is made use of by most writers and teachers on this branch of medical science, the work gives evidence that the lectures of the author are far above the level of those usually given at Medical Colleges on the same branch of science.

◆

Transactions of the Medical Society of the State of New York, 1858.

Through the kindness of Dr. Willard this book has been laid upon our table. It is replete with matter of much value to the profession. When medical societies accomplish their legitimate object and bring out something of interest to the practitioner, which will add to the real advancement of the science of medicine, we then as journalists are happy to make note of it. The article on the use of anæsthetics by Dr. Van Buren deserves more than a casual reading, it being a summary of the various agents used, and the manner of using them. Much of the space is devoted to the advocacy of the employment of these agents in Obstetrical practice.

We also find reported a large number of cases of "Pernicious, Congestive, or Brain Fever," that has so recently raged as an epidemic in many parts of the East with such fearful mortality. The book contains many other articles of importance, but as we are writing a notice and not a review we do not think it necessary to say more.

◆

Annual of Scientific Discovery ; Or, Year-book of facts in Science and Art, for 1858. Exhibiting the most important discoveries and improvements in mechanics, useful arts, natural philosophy, chemistry, astronomy, geology, zoology, botany, mineralogy, meteorology, geography, antiquities, etc. Together wtih a list of recent scientific publications ; classified list of patents ; obituaries of eminent scientific men ; notes on the progress of science during the year 1857, etc. Edited by David A. Wells, A. M. Boston, Gould and Lincolin.

The extensive title page quoted above, clearly indicates the nature of this work. The present volume is stored with many new facts and should find a place in the library of all who are desirous of keeping pace with the rapid progress which is annually being made in the acquirement of scientific truth.

Report of the Pennsylvania Hospital for the Insane for the year 1857. By THOMAS S. KIRKBRIDE, M. D., Physician to the Institution.

Annual Reports of the Officers of the N. J. State Lunatic Asylum; at Trenton, for the year 1857.

Reports of the Trustees and Superintendents of the Butler Hospital for the Insane, presented to the Corporation at their Annual meeting, January 27, 1858.

Fifteenth Annual Report of the State Lunatic Asylum. Transmitted to the Senate, February 7, 1858. Albany, New York.

Twenty-Fifth Annual Report of the Trustees of the State Lunatic Hospital at Worcester, Mass. December, 1857.

The Fifth Annual Report of the Board of Directors of the Pennsylvania Training School for Feeble Minded Children, to the Corporators. With the Report of the Superintendent, 1848.

Seventh Annual Report of the New York Asylum for Idiots. Transmitted to the Legislature January 27, 1858.

Fifth Annual Report of the Surgeons of the New York Ophthalmic Hospital. With an Address by MARK STEPHENSON M. D., to the Graduating Class, 1857.

Private Instruction for the Education of Imbecile and Feeble-minded Children. BARRE, Mass., 1858.

IN the above named Annual Reports we have an indication of the unceasing and continuous activity of the States, the People, and the Profession, in their care for the well-being of the more unfortunate classes of society.

We regret exceedingly that the crowded pages of our JOURNAL will prevent any analysis of their contents, but those who feel a special interest in these subjects should obtain these Reports, and give them a careful perusal.

EDITORIAL ABSTRACTS.

Chlorate of Potassa.—Dr. Felder of Augusta, Ga., says that he has long used this article which has been a favorite remedy with him in the treatment of almost every form of fever, and especially in those periodic fevers denominated Remittent. His attention was drawn *specially* to the remedy in 1832, when he gave it to a patient in accordance with the following:

℞, Chlorate of Potassa, ʒij.
Infusion of Serpentaria, f℥ viij. M.

Of this solution a tablespoonful was given every two or three hours.

He also uses it in symptomatic typhoid fevers, in which he considers it one of the very best of remedies, and as exerting an influence no other remedy possesses.

In Scarletina, internally, and as a gargle dissolved in sage tea, or an infusion of snake-root he speaks highly of it.

As a cleanser of ulcers he thinks it has no superior, of the strength of three or four drachms to eight ounces of water. He has applied it in powder to indolent ulcers, with much benefit. In salivation from mercury, in vaginal irritations, ulcerations of the os and cervex uteri, in ulcerous sore mouth, in scorbutus, spongy gums with hemorrhage, in yellow fever, and other forms of disease, he commends its use.

Apocynum Canabinum.—This plant, from the root of which Dr. Ragland has prepared a nostrum to be used as an Anti-miasmatic, has been said to contain powerful antimiasmatic powers. It is well worth a trial in Ague and other diseases of miasmatic origin.

Ampelopsis quinquefolia.—The Virginia Creeper has been recommended very highly as useful in dropsy. The bark of the vine is the part used, and it is said to be a powerful hydragogue, through the bowels, the kidneys, and skin. It is used in infusion.

Permanganate of Potassa.—This salt has been used in *cancer* of the os uteri, of the breast, on the thigh, in foul ulcers, caries, and syphilitic and indolent ulcers, as an escharotic and deoderant; and the reports of it thus far are very favorable.

Colica Trementia.—Dr. J. T. Jones reported to the East Tennessee Medical Society, an Essay on Milk Sickness, in which he considered the disease as of a mineral origin, from its occurring near mines, and from the disease exhibiting "phenomena on the animal economy peculiar to mineral poisons." In support of this opinion he quoted from Dr. McFarlane, of Ohio, Dr. Mc Anuely of Kentucky, and the general opinion of the early settlers.

As a *preventive* he recommended that the pastures be thoroughly stocked with *clover*.

The *treatment* recommended, is the free use of the Sulphate of Magnesia in large doses, every half hour, until the symptoms begin to abate. "I am inclined to consider the sulphate of magnesia a superior remedial agent in this disease."

Anthemis nobilis, or Roman Camomile, is very highly recommended by M. Ozanam as a very efficient remedy for the suppression of suppuration. He mentions several cases of extensive suppurating surfaces, which, although very obstinate under other treatment, readily yielded to the internal administration of an infusion of camomile flowers in water. He gave from, ʒj to ℥j of the flowers made into infusion every twenty-four hours. The external application of the remedy he states may be adopted in conjunction with the internal, but is not necessary as the effect is general, not local. He thinks the remedy indicated in puerperal fever, in phlegmonous erysipelas, and all cases where it is desirable to prevent too abundant or too long continued suppurations.

Potassio-Tartrate of Iron in Syphilis.—In accordance with the practice of Ricord, Mr. Brehend has given of a solution of one ounce of this salt of Iron in six fluid ounces of water and at the rate of two teaspoonfuls at a dose, two or three times a day in primary syphilis. At the same time he applies the solution of the same strength locally. With very rare exceptions he uses no other remedy. Of the many cases treated, not one had a single symptom of secondary syphilis. He says: "I have not had a single case of secondary or constitutional syphilis after treatment with the potassio-tartrate of iron alone, either in hospital or private practice, *and the only two instances in which secondary symptoms appeared since I commenced this plan of treatment have been in cases where I combined the iron with the mercurial treatment.*"

Spinal Irritation.—This subject which was so ably treated by Dr. L. E. Miller in a paper published in the COLLEGE JOURNAL for January, has led Dr. Thomas Inman to publish a work on it, in which he strives to show:

"1. That the symptoms often attributed to spinal irritation, have no connection with the spinal cord, or the nerves arising from it."

This is entirely in accordance with the views expressed by Dr. Miller.

"2. That the majority of such symptoms, if not all of them, are due essentially to the same causes which produce spinal tenderness.

"3. That the spinal tenderness results from overstraining of the fibrous origin and insertion of muscles in other parts."

Belladonna in Strangulated Hernia.—David reports two cases in addition to those already published, in which the internal use of belladonna led to the reduction of strangulated hernia, which seemed to demand an operation. He gave half a grain of the extract every half hour. In one case three, and in the others four doses were taken.

MISCELLANY.

MEDICAL STUDENTS AND GRADUATES.

We have been able by means of our exchanges to make up a partial list of the Students and Graduates of the Medical Colleges during the past season. We may be able to make our list more complete hereafter.

	No. of Students.	Graduates.
The Eclectic College of Medicine,	118	36
Medical College of Ohio,		43
Cincinnati College of Medicine and Surgery,		
Physio-Medical College,	40	12
Starling Medical College,		10
University of Michigan,	137	27
Jefferson Medical College,	501	209
Medical College of South Carolina,	216	83
Geneva Medical College,		
Castleton Medical College,		
Rush Medical College,		36
St. Louis Medical College,	125	49
Missouri Medical College,		25
Albany Medical College,		
Buffalo Medical College,		9
Nashville Medical School,	353	109
Medical College of Georgia,		61
University of Pennsylvania,	435	145
Oglethorpe Medical College,	37	11
Pennsylvania Medical Collge,		35
New Orleans School of Medicine,	126	33
University of New York,		127
Medical College of Georgia,		61
College of Physicians and Surgeons,		53
Louisville Medical College,		19
Memphis Medical College,		
University of Iowa,		
University of Maryland,		
University of Vermont,		
Woodstock Medical College,		
Dartmouth Medical College,		
Massachusetts Medical College,		16
New Haven College,		
Berkshire Medical College,		
Cleveland Medical College,		
New York Medical College,		33
New York College of Physicians and Surgeons,		53

TRACHEOTOMY.

Mr. Foster of Guys Hospital, performs tracheotomy for the removal of foreign bodies from the air passages, by rapidly going through the tissues covering the trachea without stopping to check hemorrhage unless it be arterial. And immediately turns up a flap of the trachea with scalpel and tenaculum. According to his views the embarrassed circulation causes the venous hemorrhage, and the quickest and most effectual way of relieving it is to open the trachea and restore as speedily as possible the respiration. There is a great deal of coughing and distress upon opening the trachea whether the hemorrhage has been checked or not. The ordinary plan of waiting until all hemorrhage has ceased before opening the trachea is tedious and dangerous, as the patient might suffocate before the time arrived for finishing the operation. To insert a tenaculum in the usual way causes a paroxysm of coughing and renewed hemorrhage from the distended cervical and thyroidal veins.

JONES AND SHERWOOD'S PRACTICE.

It is with great pleasure that we announce that the Second Volume of this very valuable work is now completed. The well earned and high repute of the former edition will be more than sustained by the present, which has been carefully revised and extended by Prof. Sherwood. And the Author's and Editor's names will be received as a sufficient guarantee as to its scientific and practical character. The price of the two volumes is *Seven Dollars.*

CORRECTION.

The microscope figured in the cut, at page 267 of the last College Journal, is "Grunow's" and not Spencer's Student's microscope, as there stated. By reference to our "Advertiser," it will be perceived that J. & W. Grunow of New Haven Conn., manufacture small microscopes specially for medical men. Other errors may also be noticed in the last number of the Journal, which the reader can readily correct.

THE ANIMAL KINGDOM.

We are pleased to know that E. Mendenhall of this city, has in press, and will soon issue this very valuable work, which has been very favorably received by the Savans of Europe.

NEW MEDICAL JOURNALS.

The Pacific Medical and Surgical Journal, and the Maine Medical and Surgical Reporter, are cordially welcomed to our Exchange List.

THE

COLLEGE JOURNAL

OF MEDICAL SCIENCE.

Vol. III. AUGUST, 1858. No. 8.

ORIGINAL CONTRIBUTIONS.

WHAT HAS INNOVATION AND INDEPENDENCE ACCOMPLISHED FOR MEDICAL SCIENCE?

BY I. C. DOLLEY, M. D.

Who needs to be taught that the world and the universe are full of change. All nature, from each molecule of matter, disturbed either by eremacausis or catalysis, up to the ponderous planets and their satellites, is under the dominion of an imperative law of change. And who needs to be told that this is emphatically an age and this a country of change. If any four words are descriptive of our times, they are, change, concentration, rapidity, and industry. Human intellect and aspirations are bursting the confines of old dogmas and stolid conservatism and pressing onward and upward in quest of "light, more light." How has this spirit of change affected the science of medicine?

But a few years since students and practitioners of medicine thought little of extending the range of their inquires beyond the precepts and formulas of the past. "The scrupulosity or indifference felt in regard to the results of practice, whether they were salutary or fatal to the patient, was for the most part determined by the question, whether all things had been done *scientifically* or according to the *books*." We would by no means intimate that such is not the case to a lamentable extent even now. But despite denunciation and calumny and the most bitter contempt encountered at every step, numerous medical inquirers of late years have had the audacity to step beyond the circle marked out by the schools and proclaim their adherance to the teachings of *nature* and *experience*, rather than to books and medical creeds. Many of the observing and the benevolent have long been impressed of the necessity of, and have sought for, a more sanative and physiological system of medication. The more zealous, the more theoretical and the more impulsive of these have desired to revolutionize and subvert all of the theories and facts of an old and voluminous science, instead of sifting and adding thereunto by a more extended and enlightened experience.

If we rightly understand the modern school of rational and intelligent Eclecticism, it has sought and still seeks a "golden mean." It has met each class of medical reformers with a fair, generous and philanthropic spirit. Without questioning the sincerity of any, it has anxiously sought for truth and accepted it, if accompanied with its seal and impress, caring little from whence it came. It has not been the purpose of its advocates to defend false reformers, nor to favor their extravagant propositions. It has only insisted that the benevolent heart should not be discouraged by hasty censures and violent abuse, and that the true spirit of progress and reform should be ever welcome.

Who will deny that the independence of Rational Eclecticism has already accomlished very important and salutary results for medical science? We may say that it is now about fifteen years, or something less, since the peculiar teachings of this class of practitioners began to be diffused. These peculiarities of faith and practice in reference to the choice and substitution of the less hazardous remedies, the development of the indigenous materia medica, untrammeled, faithful and impartial research, are now too well understood to require rehearsal; yet when these sentiments were first avowed and published by their intelligent and liberal minded advocates, as controling and guiding principles, they were treated by the medical press and by the profesion at large as consummate heresies.

At the time alluded to, no one was permitted to question through Medical Journals or other channels, the utility of venesection in all inflammatory diseases, (to which it was by no means confined.) Nor to deny or underrate the antiphlogistic and anti-fibrinous virtues of calomel and antimony. To do so was to call down upon the valorous skeptic not only contempt and neglect but charges and epithets anything but genteel and agreeable. Now, prominent in almost every medical journal are essays and reports, not only establishing the fact that depletion by the lancet is altogether unnecessary in the treatment of inflammatory disease, but that it is many times highly pernicious—that mercurials, antimonials and other perturbating measures may in numerous cases give place to veratrum, aconite, gelseminum and other agents which are physiological as well as therapeutical in their effects, and which are also susceptible of digestion, assimilation and elimination. Practical men have found old theories and old books false guides, which, together with the results of their practice, were driving many theoretical minds into homœopathy, many into skepticism and disgust, and not a few sensible men into practical if not avowed Eclecticism. A president of the Empire State Medical Society, regardless of theories and authorities, declares to his brethren in convention assembled, that, "the good people of his city have no blood to lose except in the service of their country." Other medical men of standing and repute declare upon the "house top," that "Dr. Rush was particularly blood-thirsty," that "there are many cases in which the use of arsenic and the mercurial preparations inflict lasting injury to the patient without removing the original disease." The profession now receive this with a good grace, not even repelling the charge as slanderous and false. Old antagonists, the late champions of the obsolete measures alluded to, now in their shy and timorous courtesy manifest great satisfaction in telling us how very seldom they employ the lancet and prescribe mercurials.

In the outset of the Eclectic movement, to advocate the use of any one of the now long list of new and popular indigenous remedies, was to identify or to confound ones self in the estimation of the profession with Thomsonians or Botanics. Now the largest and best laboratories in the country are vieing with each other in the preparation and sale of these same remedies. The books in my preceptor's library, some twelve years ago, gave me a knowledge of a list of imported and exotic remedies consisting of anthemis, digtalis, squill, rhubarb, jalap, senna and colchicum, but left me untutored in the properties of a list of potent and profitable medicines with which almost every enterprising druggist in the United States now takes pride in informing his customers that he keeps himself supplied. Apocynum, asclepias, podophyllin, leptandrine, cimicifuga, sanguinaria, xanthoxylum, scutillaria, stillingia, hydrastine, aletris, helonia, eupatorium, corydalis, chelonia, trillium, etc., were as an unknown tongue to every regular physician and apothecary only half a score years since. Now the enterprising firm of Tilden and Co., of new Lebanon find it to their interest to inform gratuitously 30,000 physicians in the United States, that they can supply them with all of the above, and numerous other articles of our indigenous medicines, in their most tempting and reliable forms, in sugar-coated granules, alkallods, resinoids, neutrals, and in fluid and solid extracts. Older and equal in the sale of these articles of medicine are the firms of Merrell & Co., and F. D. Hill, of Cincinnati. Druggists in every city and large town in the U. S., exhibit shelves well filled with these medicines which only some ten years since constituted a part of the armamentarium medicarium of a few who were debarred fellowship by the great mass of the profession.

The use of these medicines has not become universal nor indeed general among practitioners, yet so far have they come into use as to establish the very extensive and profitable trade alluded to, and to allow the most intelligent and successful practitioners in nearly every town to relate their experience and favorable opinion of several of the new remedies. Journals which would refer to eclecticism and its measures only with a supercilious sneer, now not only mention favorably these same measures, but even humble themselves to a laudation of Samuel Thomson's sheet anchor (lobelia) in the treatment of laryngismus stridulus, bronchitis, trachitis, pertussis, spasmodic asthma, tetanus and other convulsions, and rigidity of the os uteri. Although they may not welcome us cordially after our tour of exploration into partially defined medical regions, we are glad to have them thus share all of our "specimens" and spoils, and shall we not say, our trophies.

Great has been the change in practical therapeutics and parmacy in only ten years. Who in viewing these changes dare say that the medical world does not move? It does move and never before so rapidly and majestically. But does the acumen of our age and times allow of a retrograde motion in science, allow a human-born calling to move towards charlatarny and quackery? Yet "regular" and "legitimate" medicine is embracing the views and measures of this eclecticism, the advocates of which have been so often opposed, buffeted and scorned. Cannot physicians understand that very many of the views they are now adopting and the changes their practice is undergoing, were years ago established and fixed facts with a class of consciencious and intelligent practitioners in this country? To these more liberal practitioners, these "new medicines" are no longer new. To them their virtues and appropriate uses were in the main established years ago. Many like the writer can report from fifteen thousand to twenty thousand cases of disease treated with more than usual success wholly or in part with these medicines, and in which the lancet, calomal and antimony were dispensed with. It needs scarcely to be mentioned that very much positive and exact knowledge concerning their properties and uses has been gathered from empirical experience, and when they were questioned more accurately by the voice of science as to their effects and virtues as medicines, they were not slow in responding. Never in reference to anything in medical practice have satisfactory results accumulated more rapidly than in favor of the substitution of many of these medicines in place of those which both science and common sense so strongly condemn.

It is but reasonable to claim these changes and innovations in American therapeutics as the fruits to a great extent at least of the independent polity of those who regarded more the general behests of science, humanity and God, than those of fashion, prejudice and dogmatism. If these minds have not been principally instrumental in bringing about these changes, why do they occur in time, as a sequence?

Such facts and changes possess no little interest as illustrating most forcibly the influence which the civil and political independence of our nations exerts over the development and advancement of science. American medicine will resist and throw off all despotism and tyranny whether European or home-bred. They illustrate the truth of what was written by the learned and liberal George Moore, M. D.: "Intellectually speaking, man is not gregarious, but every mind has a track of its own as well as a body of its own; therefore, those who have felt the value of mental culture and have taken their course untrammeled, have generally shown their intellectual vigor by a greater capacity of endurance as well as by greater freedom, boldness, and healthiness of thought. We might as well look for easy walking in a Chinese lady whose feet have grown in iron shoes, and those very small ones, as for easy thinking in a mind that has been cast in a mould constructed to suit the minimi of the million."

The American people are outgrowing their "blue laws," whether prescribed by authorities or scientific associations. During calomal times, or during the last half of the seventeenth contury, the following was a law in Massachussets. "It is therefore ordered that no person or persons whatever, employed at any time about the bodies of men, women or children for preservation of life or health, as chirurgeons, midwives, physicians, or others, shall *presume to exercise or put forth any act contrary to the known or approved rules of art in each mystery and occupation.*" In 1760 it was ordered that, "no person whatever, shall practice as physician or surgeon in New York before he shall have been examined in physic or surgery and approved of, and admitted by one of his *majesty's council*, *the judges of the Supreme Court* AND THE KING'S ATTORNEY GENERAL." Dr. John Breck, speaking of the state of the profession in this country before the revolution, says: "From the connection subsisting between the mother country and the colonies, as may naturally be presumed, the same doctrine prevailed in both, and the practice was essentially the same." At that time medical practice was environed in New Jersey and Virginia by regulations similar to those then in operation in Massachssets and New York. How much was the standard of practice elevated and improved in the colonies by such regulations and restrictions? Let Dr. Douglas, who wrote in 1753, answer. He says; "In general, the physical practice in our colonies is so perniciously bad, that excepting in surgery, and some very acute cases, it is better to let nature, under proper regimen, take her course, than to trust to the honor and the sagacity of the practitioner; our American practitioners are so rash and officious, the saying in the assœrypha (38 and 15) may with much propriety be applied to them. "*He that sinneth before his maker, let him fall into the hands of the physicians!*" Frequently, there is more danger from the physician than from the distemper. * * In the most trifling cases, they use a routine practice. When I first arrived in New England, I asked a most noted facetious practitioner what was their general method of practice; he told me their practice was very uniform; bleeding, vomiting, blistering, purging, anodynes, etc., if the illness continued there was *repetendi*, and finally *murderandi*. Nature was never to be consulted or allowed to have any concern in the affair. What Sydenham well observes, is the case with our practitioners: *Æger nimia medici diligentia ad pleures migret.*

Has a growing liberality, a freer spirit, a vigorous eclecticism served to aggravate the state of the profession as depicted above? An editorial in a late medical journal, before me says: "No country possess in its medical men a higher standard of professional character than the United States. They are qualified for all and every station where sound learning, good judgment, disciplined minds and sterling integrity are required. They range through the whole domain of nature, and while administering for the alleviation of physical suffering, they economize life by studying into all the mysteries of the animal, vegetable and mineral kingdoms." The cities generally are shown to be blessed with "an extraordinary amount of medical character of the loftiest order." In England they would all be fellows of the Royal Society; in France, members of the Institute, Legion of Honor, and kindred institutions, while the Nestors could be drawing pensions for past services to mankind in general. But in democratic America, all stand upon the same universal level, where the race is open to the swift, and bread to men of understanding; and the greatest reward at the close of a long, successful professional life, the approval of our own conscience." More to be deprecated than anything else at this time among the medical men of this country, is the spirit of animosity, ungallantry, envy and malignity, towards such as conscientiously differ from them in views of the utility of venesection, the mercurials, etc. To correct these evils, to cast out this devil, is not the least noble part of the mission of eclecticism. In the accomplishment of this great work the movement has failed. These evils have been prescribed for too generally on the principle "*Simili Similibus Curanter*," not, however, from a conviction of the truth of the homœopathic dogma. Let them be treated hereafter more generally on the principle "*Contraria Contraris Curanter.*" Let every one still aspire to excell each "fillii Æsculapii" in medical truth and liberality, and at the same time manifest less vanity, animosity and hatred; and ever remember that physicians have been nowhere released from the obligations of the golden rule.

HEREDITARY TRANSMISSION OF ARTIFICIAL DEFORMITIES.

BY PROF. J. R. BUCHANAN.

The question whether cranial deformities artifically produced are transmissable to posterity, appears to me, like many other questions in natural science, not susceptible (in the present state of human knowledge,) of a complete and dogmatic answer, either affirmative or negative.

The total denial of its possibility would seem rather presumptuous in the present state of physiological science, although our savans are generally prompt to deny the possibility of anything they fancy impossible.

If we assert that artificial deformities of the head may become permanent by hereditary transmission, we encounter another law of nature—the tendency of all organs when vigorously exercised and unrestrained to attain their full normal developement. We know with what facility the infantile head, however it may be compressed or deformed by parturition, resumes the natural form which corresponds to those of its parents' heads. It is true that this compression kept up until the head has been fully ossified will stamp a permanent deformity upon the individual; but when the head of the offspring is being moulded *in utero*, there is no mechanical pressure present, and the cranium is moulded by the growth of the brain. It is an important phrenological principle that the growth or formation of the cranium is determined by that of the brain, consequently the head of the infant will assume a form expressive of its character, which cannot correspond to the deformity of its parents, unless the cerebral development and character of the parents have been changed to correspond to their deformed crania and are thus transmitted to their offspring.

We come then to the question—Is it possible by any external pressure upon the cranium to compress and retard the growth of the subjacent organs and thus permanently change the brain, the character, and the hereditary form of the head. Upon this subject, the scientific world might be much enlightened by new facts.

I am very willing to believe when a sufficient number of facts shall have been produced, that natural heads may thus be permanently deformed, and that the Choctaw form of head was thus produced, as maintained by the veteran craniologist, Prof. W. B. Powell. But if we admit this, we must go the whole length of the doctrine, and admit that the heads of every race may be changed by mechanical pressure so as to revolutionize their phrenological character. The principle must also be applicable to individuals to any desirable extent, and we shall finally be compelled to acknowledge the wisdom of Midshipman Easy's father, whose great machine for improving and equalizing all mankind by compressing all their organs of evil propensities was applied to the reformation of a murderer, by depressing his organ for murder. The machine was never fully tested, however, for the enthusiastic inventor, while standing on a lofty platform designed to elevate his machine before the world, inserted his own head in his machine for squeezing the organs and as the scaffolding of the platform gave way like an unsubstantiated theory, he was left hanging by the neck, until thoroughly dead. But, (jesting aside,) his invention certainly deserves to be revived for the improvemet of mankind (and other animals,) if it be true that national heads and character may be moulded by compressing the skull.

Prof. Powell asserts upon hearsay evidence that the Choctaw head has been permanently changed by compression; yet he has entirely omitted to mention *what was the nature of the deformity* thus established. If he had stated the fact that the peculiarity in question was the flattening of the upper occiput at the posterior part of Firmness, Self-

Esteem, and what Spurzheim called Inhabitiveness, the reader might have perceived how impossible it was that such a flattening had been mechanically produced. The head being this compressed in a direction toward the chin, the pressure would have required to be counterbalanced by a bandage around the lower jaw.

Supposing that all the Choctaw tribes without exception had been thus deformed a century or two ago, (a difficult supposition) the deformity would have disappeared by this time in their offspring, as in other cases. When I procured, about twenty years ago, a large number of skulls of the Chetimadic tribe of Indians and inspected several hundreds at the Golgotha (on a Louisiana island) where I found them, I found that the tribe had been in the habit of compressing their heads by flattening the forehead. In the oldest heads the deformity was very marked, (one of which I still preserve,)—in the most recent specimens the deformity had disappeared. In the Choctaws I have found no such indication—their natural conformation was singularly uniform.

In the lapse of time I think Prof. Powell has mis-recollected my opinion of the Choctaw head. The principle error which I attributed to Gall and Spruzheim, was in reference to the organ which they called Inhabitiveness. This organ was singularly deficient in Choctaw heads, and yet as a race they have shown great love of home, great unwillingness to leave the homes of their fathers; and moreover, all of that steady *concentration* which Mr. Combe attributed to the same organ. Those functions belong to other portions of the brain, as I have demonstrated by experiment. The extreme deficiency of these organs in the Choctaws who manifest so much more of those faculties than other tribes, proves positively the error of Gall, Spurzheim and Combe. But if, as Dr. Powell supposes, the deficiency was artificially produced, we have in such a fact an important scientific principle which may be made tributary to the future improvement of mankind.

ABSORPTION AND ABSORBENTS.

BY PROF. T. E. ST. JOHN.

Under the above heading in the last number of the College Journal I described the anatomical arrangement and structure of the *lymphatic system*; viz., the lymphatics, lacteals, and glands; not because they are pre-eminently entitled to that name above all other vessels of the animal body, but like many other names in anatomy and physiology it originated at a period when it was supposed that the *lymphatics* were the only vessels concerned in the process of absorption. It is now generally known and admitted that they perform but a portion of the absorption which is going on in the body, yet as the name is so thoroughly established, and it is well known that they do assist in that process, it would not favor the advancement of the science to give them a new name, and would tend rather to confuse the learner than elucidate their action. And the name is not entirely misapplied, inasmuch as this is their only function besides that of conveying the fluid absorbed inwards.

It is evident from even a casual examination of the structure of these vessels that they are adapted for the conveyence of fluid in one direction only, and whatever other functions they may be possessed of, they evidently are designed to convey a fluid *into* the blood either from the intestinal mucous membrane, or from the interior of the organs themselves, derived either from the process of digestion, or from the waste of the different tissues of the body, or directly from the circulating mass.

That the lacteals absorb, is rendered evident by an examination of them in a fasting, and a recently fed animal. In the former their contents are transparent, in the latter they contain a peculiar milky and opaque fluid in which are seen a large number of oil granules. As regards the action of the lacteals in the reception of different kinds of food, much difference of opinion exists; and Bernard the most recent experimenter denies that they have anything to do with the taking up of either *albumen* or *sugar*, and marks them out as aids to the blood-vessels in the conveyence of fat. He considers the chyle as lymph formed from the destructive assimilation of the intestinal canal holding in suspension only a quantity of molecular fat. He came to this conclusion from the results of several experiments performed upon dogs, cats, and rabbits. After introducing a quantity of sugar into the stomach of these animals he soon found it in the blood of the vena porta, but not in the contents of the thoracic duct.

Again, if a solution of sugar be injected into any vein on the surface of the body, it will be thrown off almost immediately by the urinary secretions ; but if the same quantity be injected into the portal vein so that it is compelled to pass through the hepatic tissue before it enters the general circulation, it becomes assimilated and remains in the blood. In the first instance we have the condition which would obtain were the sugar to be taken up by the lacteals and emptied into the general circulation without passing through the liver, in the latter the result is similar to that in the normal process of digestion when the sugar is taken up by the veins.

In like manner he found that if albumen, (as the white of egg,) diffused through water, be injected into the jugular vein, the urine became albuminous, but if injected into the portal vein no such result followed. Hence he concluded that both sugar and albumen required modification previous to their entrance into the circulation, which was effected by the liver, and that these substances were taken up by the *veins* and not by the lacteals. The chyle contains a small quantity of albumen, but it has not been proved that there is an excess of this substance even when the animal is fed exclusively on albumenous substances.

To prove that the lymphatics absorb, we have only to notice the phenomena of disease, or those produced by direct experiment. Thus, in syphilitic affections, the poison is frequently carried along the lymphatics, exciting inflammation and deposits of lymph or pus, and the matter of the abscesses so formed possess all the poisonous properties of the original virus, proving that there has been a multiplication, as well as a real transmission of the virus along these vessels. The inflammation that so invariably ensues along the lymphatic vessels and glands after dissection wounds, is due to the propagation of the poisonous matter in those vessels. In an experiment by Schreger in which he tied a bandage tightly around the hind leg of a puppy and kept the leg immersed for twenty-four hours in milk, it was found that the lymphatics were filled with the milk, but none could be detected in the veins. In the experiments of Muller with frogs, he found that after an immersion of two hours duration of the posterior extremities of this animal in a solution of prusiate of potassa, the salt had penetrated the lymphatics but not the veins. The same experiment was performed by Erichsen on the human subject with a view of ascertaining if the salt would pass into the blood, but he failed to produce any satisfactory results. It may be worthy of remark that contrary to the effect produced by the application of soluble substances to the intestinal mucous membrane in which they may almost immediately be detected in the blood, these substances when applied to the skin are generally more readily discovered in the lymphatics than in the veins.

The lymphatics as well as the lacteals, (except during the digestive process,) are filled with a peculiar transparent fluid called *lymph* in which are found a considerable number of globular bodies, (lymph corpuscles,) which in structure and appearance resemble the colorless corpuscles of the blood. Besides those in the lacteals during digestion there is a considerable quantity of oil granules, which constitures one of the chief differences between chyle and lymph, and has received the name of the *molecular base*.

The *lymph* contains a small quantity of albumen, and also some fibrine. Some observers suppose it to be simply albumenous as it first exists in the smaller vessels, and to acquire its fibrine in its passage through the glands, but it does not seem at all probable that such is the case, but rather that the fibrine is formed from the disentegration of the various tissues, and as the process of absorption is not confined to the terminal net-works of the lymphatic vessels, it would, as might be expected, be increased in quantity as it approached the larger vessels. The saline matters in the lymph are the same as those in the blood. It also contains an appreciable quantity of iron.

The *corpuscles* present different varieties, or rather the same corpuscles is seen in different stages of perfection, one, in which the nucleus is entirely concealed by a quantity of granular matter, another when the nucleus becomes partly visible by the gradual subsidence of the granules, or in other stages when this granular matter entirely disappears and leaves the corpuscle clear. The latter is the perfectly formed white corpuscle of the blood.

The contents of the lacteals, the *chyle*, contains a quantity of albumen and much more fat than the *lymph*. It contains but very little if any fibrine, and is incapable of spontaneous coagulation. In addition to that found in the lymph there is found the *molecular base*, which depends upon the quantity of fatty matter taken in the food, as it has been ascertained that if fat be entirely excluded from the diet, the chyle is not milky but transparent. The corpuscles are similar to those of the lymph. The particles of the molcular base do not look like oil globules, but appear to have been broken up into infinitely small particles by the action (as was shown by Bernard,) of the pancreatic juice.

The following analysis was made by G. O. Rees of the fluid taken from the thoracic duct of a criminal. He had taken two ounces of bread and four of meat, two cups of tea and a piece of toast, a short time before he was executed. The quantity obtained was six drachms, having a milky hue and slight tinge of buff.

Water,	90.48
Albumen, with trace of fibrine,	7.08
Aqueous extractive,	0.56
Alcoholic extractive, or osmazome,	0.52
Alkaline chloride, carbonate and sulphate, with traces of alkaline phosphate, and oxide of iron,	0.44
Fatty matters,	0.92
	100.00

In regard to the quantity of chyle and lymph that flows through the thoracic duct during twenty-four hours, much difference of opinion exists. In fact, the different modes of deciding that are recommended to be adopted would naturaly lead to the supposition that very different results would be obtained, and when viewed in the abstract would inevitably induce the belief that physiologists in all cases were no better than mere guessers and empirics (which in many instances I am not inclined to deny,) and really know no more of the subject they are investigating than they do of the forces that govern the inhabitants of that enclosure over whose high battlements Milton's rebels were hurled with such wonderful and fearful impetuosity into the unexplored regions below. But when it is said that one investigator gives one estimate, and his reasons and arguments by which he arrived at that opinion are also stated; another of as equally good authority gives another estimate, accompanied with the reasons for *his* conclusions, then the charge of empiricism vanishes, and each will receive due merit, as he is entitled, and as he judges correctly or otherwise from the data he has presented.

Mr. Cruikshanks taking for his standard the rapidity with which the chyle flowed thorough the mesentry of the dog, (four inches a second,) estimated the quantity poured into the subclavian vein at four pounds an hour.

Mr. Bidder, by cutting the thoracic duct in the cat, observed how much would be poured out in five minutes, from which he concluded that a fluid equal to one sixth the weight of the body, or the whole weight of the blood was poured into the circulating fluid every twenty four hours. Geiger obtained from an open lymphatic on the foot of a horse from three to five pounds of lymph daily. It is evident that large quantities of lymph and chyle pass through the thoracic duct in twenty hours, as may be demonstrated by examiningthe lacteal vessels during the digestive process, but the precise quantity is for the present likely to remain unknown.

The lacteals in addition to the part they take in the process of digestion probably perform the same service to the intestinal membranes that the lymphatics do to the other textures of the body.

The lymphatics probably take up the excess of liqour sanguinis that is not needed in the process of nutrition, as this would be more likely to enter the lymphatics than to return to the vessels from which it was given out. This they receive either directly from the capillaries themselves, or indirectly through the tissues. It is also not improbable that the effete materials resulting from the wearing out of the various tissues are returned to the general circulation through the medium of the lymphatics. And another and if possible, more important function, is that of taking up and conveying inwards the various substances applied to the external surface whether the virus of disease or medicinal applications. It is well known how soon an external application of cherry laural water, or a mixture of camphor and chloroform will exert a soothing influence upon neuralgic pains. These must act through the lymphatic system, for they could not exist in the general circulation in sufficient quantities to do any appreciable amount of good without material injury to the individual.

The lacteals are each succeeding year placed lower in the scale of usefulness as regards the digestive process, while the lymphatics proper, or those originating in the skin, are invested with more and more interest to the philosopher, whether engaged in preserving his own life, or attempting to alleviate the sufferings of another. The laws which regulate the process of absorption in lymphatics as well as all other animal membrane may be found by reference to number five of the College Journal under the head of Osmosis.

TRUSSES AND THEIR USE.

BY A. B. JACKSON, M. D.

If I believed that the great body of the medical profession well understood the mechanism and scientific application of the various trusses now in use for the treatment of hernia, I would not be so presumptuous as to present an article on this subject.

There is a singular notion prevalent among the country people, and the same idea was entertained by the wisest of the ancients, that hernia is an immoral disease. Charlatans, the harpies of every age, have turned to their own advantage this strange caprice, and swindled such victims as were unfortunate enough to repose confidence in unprincipled men.

At the present day almost every one is aware that a truss is essential to the relief and cure of hernia, hence upon receiving a rupture a person at once repairs to a druggist or truss establishment and has an instrument applied. In some instances the truss obtained under such circumstances will answer the desired purpose, but there are cases resembling hernia which ought not to be treated with of a truss. Recently a young man came to me who had been to the city and had a truss applied to an enlargement of the groin that extended into the scrotum. My patient supposing he had rupture, repaired to a place where trusses were advertised, and submitted his case for treatment. The gentlemanly proprietor applied a truss and assured the young man that the instrument would effect a radical cure, as it had in many cases, naming a dozen or two, and presenting him with a little book on hernia, with certificates of cures performed. I examined the case the morning after the truss had been applied, and could not ascertain either from the history of the case, or from existing appearances that my patient ever had a rupture. No changes had been produced by the truss, consequently I had the same means of diagnosing the case that the instrument vender had. There was an enlargement of the spermatic cord extending from the testicle to the inguinal canal, but no evidence of a hernia could be elicited by the patient's straining, coughing, or other efforts. The enlargement of the cord was produced by a dilitation of the spermatic veins, constituting ordinary varicocele. The person who applied the truss, which must increase the difficulty by pressing on the course of the veins, causing a stagnation of blood in them, must have been an ignoramus or a rascal. If he applied a truss for varicocele in one instance he must have done the same a great number of times, for a varicose condition of the spermatic veins is a very common difficulty, and one from its appearances that is apt to lead a patient to suppose that he is troubled with hernia.

Another case came under my observation which served to convince me that some of the bandage venders are great swindlers. A gentleman having hernia of a number of years standing applied at a truss establishment for relief. He had been unable to reduce the protruding mass for some time, and asked the truss vender to attempt it, which he did, but failing said: "I'll put on you a truss, it will do you just as much good as if the hernia was reduced." So he did, and realized nine dollars profit, as well as endangered the life of his fellow man. These sharpers not unfrequently apply trusses in cases of hydrocele, inguinal tumors, abscesses, etc.

To do away with such abuses, the medical profession must take into its hands the business of fitting trusses. Let every practitioner institute a reform in these matters by manifesting more interest in the subject of hernia. Patients would then go to him for advice instead of to unprincipled men who know nothing of the anatomy and pathology of the disease they treat. Let there be skilful bandage makers as there are surgical cutlers: but it is no more the business of these tradesmen to use their wares in the treatment of disease than for the druggist or pharmaceutist to prescribe the medicines he manufactures and prepares.

If a patient is afflicted with hernia, the variety of it is to be noticed, an estimate is to be made of the amount of pressure that will be required to retain it, the size and shape of the pad are to be considered, as well as the length of the spring and strap. The latter is to be ascertained by measurement. An inelastic tape is passed around the hips just below the crests of the ilia for inguinal or femoral hernia, and the distance noted. Every individual case needs separate consideration, and the instrument must be adapted to its peculiarities. The physician can then obtain of the bandage maker such an instrument as the patient really needs. A proper truss presses just enough to retain the viscera within the abdomen without producing atrophy of the parts against which the pad rests.

Trusses have been made of almost every conceivable form and variety of material. The construction of the pad has elicited the most skill. Its shape has been mostly oval and pyriform, though other fanciful patterns have been brought into use. Its material may be wood, glass, ivory, caoutchouc, or leather stuffed with hair, wool, tow, or felting. The pad may be held in place by a strap or bandage, but it is commonly attached to the end of a covered steel spring which surrounds the hips just below the crests of the ilia, and connects by means of a short strap and button to the other end of the instrument.

A good truss for the retention of inguinal hernia should have a pad constructed of material that will be somewhat yielding, and be of the common oval or pyriform shape. It is well to have it covered with gutta percha to avoid the absorption of perspiration, and stuffed with hair or felting to give it elasticity. Glass and ivory are too hard for pads; wood will become rough from the action of the cutaneous secretions, and accumulations of dirt on its surface; and the common cushions covered with cloth or leather absorb perspiration and act like a poultice upon the cuticle. The spring should be long enough to surround the hips and cross the pubes so as to rest on the opposite side. For instance, in case of right inguinal hernia the pad end of the truss is to be brought around the left hip and across the median line of the abdomen to reach the diseased part. By this arrangment the pad is more securely held in place, and the pressure more easily borne. For laboring men the spring should be covered with gutta percha, that it may wear a long time without becoming ragged, or disagreeable from the absorption of the cataneous exhalations. Trusses applied to infants as they usually are, soon become instruments of torture and disgust. The leather with which they are covered, soon gets hard from frequent wetting, and the spring rough from accumulations of rust. Oiled silk will serve to cover a truss if gutta percha be not at hand. Perineal bands are sometimes required to keep truss pads in place, yet they excoriate the parts over which they pass.

Before applying a truss the hernia is to be reduced. This is an easy matter in most cases. To effect a reduction let the patient assume a reclining position with the muscles relaxed about the groins. The patient is then requested to breath out as much as possible from the lungs, when gentle taxis on the tumor will cause it to recede within the abdomen. The pad of the truss is now to be placed upon the integuments covering the inguinal canal, but so that it shall bear more upon the *internal* than the external ring. It is a common mistake to place the pad too much over the external opening of the canal except the hernia be of the *direct* variety. The patient should be instructed in regard to this matter or he will apply the truss so low that the testicle will become atrophied from compression of the spermatic cord between the pad and the pubic bone. Likewise when the pad is placed too low, the intestines will find their way into the upper part of the inguinal canal, and may there become strangulated while the truss is on.

In persons under forty years of age with recent ruptures a radical cure may be expected to follow in many instances the continued application of a proper truss. But it is found by an extensive experience that no truss yet invented can be relied on with any degree of certainty to effect a radical cure in cases of old hernia in adult subjects. The common wooden padded truss which excites irritation, without producing pressure enough to induce absorption, performs as many real cures as any other. Those interested in *Marsh's Patent Radical cure truss* claim that it will cure nine cases out of ten, but such assertions are extravagant. No such proportion of cures are effected by it so far as my experience goes. I have sent fifteen patients to Marsh's New York and Cincinnati offices, where they had the so-called " radical cure trusses" applied ; and I have observed thirteen other cases that have been under the influence of the same instrument. Of the twenty-eight cases I remain familiar with the history of twenty-five, three having gone to California soon after the trusses were applied and the results were lost to me. Five cases have continued apparently cured for a period varying from two to four years, and no support is worn. Eight of the twenty-five cases are now wearing other retentive trusses, the so called radical cure instruments being thrown aside as insupportable or useless, after having been worn by them from ten days to two years and a half. Two other cases have been cured by operations, one by injecting the inguinal canal with the tincture of iodine, and the other by

Wutzer's plan. Six of the eighteen cases were evidently injured by using Marsh's truss, and in the following way. The springs were so stiff, the force being concentrated on the ivory ball, that absorption of the abdominal walls, and a consequent enlargement of the rings took place. In two instances the absorption was so considerable that the whole ball which was an inch and a half in length, and an inch in its short diameter, would drop into the opening made by it. The consequence of such a rent in the inguinal region may well be imagined. It was almost impossible by any arrangement to retain the viscera within the abdomen. When a truss produces irritation and not much compression there will be thickening of the parts from effusions of plastic lymph, but when the irritation ceases, as it will after wearing Marsh's truss for a few weeks, the absorptive process is much hastened by the instrument. Absorption under pressure is well known to medical men. An aneurismal tumor of the temporal artery has perforated the walls of the cranium, and the same disease of the subclavian has divided the clavicle. Other bones have given way under the pressure produced by the growth of tumors.

With facts like these before them, it is a matter of some surprise that surgeons are found who continue to recommend the instrument referred to. The same surgeons, too, make loud protestations against everything *patented*. Is it because they receive a heavy per cent. on all cases recommended that they continue to advise Marsh's truss? It is to be hoped that they do not allow themselves to be bought so cheaply. I have no less regard for the instrument because the patentee is enabled to place such a high price upon his truss as to exclude it from general use. A truss may as well be patented as a book. And the owner can place such a price upon his patented property as he pleases, but pecuniary interest will commonly induce patentees to place the price of their ideas within the reach of all. If Dr. Dunglison held his dictionary at twenty dollars, very few practitioners would buy it, and its limited sale would afford no profit.

There is a variety of patented trusses in the market. Of these the most serviceable are North's and Sherman's. Both are good instruments for retaining hernia, and have the pads so connected to the springs as to admit of being moved to any requisite angle and there fastened. North's, however, can only be rotated like a wheel upon an axle, while Sherman's has a ball and socket joint, that allows of universal motion, and a clamp to fix the pad in any position. It is perhaps capable of being adapted to a greater number of cases than any other truss in use.

The *self-adjusting* truss of the shops is theoretically an admirable instrument for retaining hernia, but in practice it is found wholly unfit for laboring men. The intestines will find their way from under the pad during the various movements of the body. All such trusses endanger strangulation, and are consequently worse than useless. To enumerate every style of truss that has been urged upon the profession and public by interested persons would require more space than the subject demands. It is needless to say that most of them are trifling things, and wholly unworthy of professional attention. The cheapest kind of truss is generally better than the more expensive of them.

CHOREA.

BY JAMES CROOK M. D.

As Chorea assumes a chronic character it is slow in its progress, often requiring time to affect a perfect cure. The first accurate account we have of this disease was written by Severtus, of Wittemberg and Felex Plater, of Basle, Germany; both of whom wrote about the sixteenth century. It has been denominated by a host of terms, as Chorea, derived from a Greek word signifying *chorus* which of old accompanied dancing; Dance de St. Guy; St. Modesti; Or chestro Mania; Epilepsia Caltoria; and Chorea mania. It is now generally known as Chorea or St. Vitus's dance. This last name was derived from a certain Chapel near Ulm, in Germany, by the name of St. Vitus, where it is said that women having peculiar nervous affections would resort in the spring of the year to dance off their affections. Some writers however dated its history back to a more earliy period, as far as 1374, at which time the remarkable dancing mania prevailed throughout Germany. At that time it was thought to be produced by Satan, and the Monks of the Convent of Korby could tell Satan to get hence, and he would depart under the influence of their patron, St. Veit. I think this disease of a similar nature to epilepsy.

The patient is much agitated with strong emotions and considerably convulsed, but the nervous agitation is generally confined to one side, ocmmonly an arm and leg. Dr. Thomas says that the lower extremities are at first most affected. There is a kind of lameness or weakness in one of the legs, and although the limb is at rest, the foot is frequently agitated by involuntary motions, turning alternately inward and outward.

In walking the affected leg is not lifted as usual, but is dragged along as if the whole limb was paralized, and when it is attempted to be lifted the motion is unsteadily performed, the limb becoming irregularly and ludicrously agitated. The motions of the arms likewise are variously performed, and are drawn by convulsive retraction in a contrary direction to that intended; and if a glass of liquor be put in the hand to drink, the person cannot direct it properly to the mouth, and when it reaches the lips he drinks hastily. The tongue also participates in the general disease so as to render articulation nearly unintelligible. It is thrust out of the mouth involuntarily, and the head is affected. If the disease continue long the mental faculties are impaired, childishness ensues and the body and limbs become emaciated.

"This disease," says Prof. Eberle, "rarely comes on suddenly. Its approach is gradual, with a variety of premonitory symptoms varying in duration from a few days to several months, indicative of a deranged state of the digestive organs, and nervous system." In addition to the foregoing symptoms there are slight pains in the stomach, and bowels, variable appetite, constipation, hard and tumid abdomen, giddiness in the head, palpitation of the heart, sometimes imperfect vision, fullness in the head with temporary confusion of the mind, itching of the nose, cold feet, variableness of disposition, fluctuating between gloom and cheerfulness, in some instances a remarkable proneness to mischievousness and unruly conduct. During sound sleep when volition is in a state of temporary suspension, all the spasmodic motions which characterize the disease entirely cease, the system is at rest, and the troubled sea is calmed, but as soon as the patient is again aroused from its rest the subject is again tossed by the tempest. It is asserted by Richter and others that the peculiar spasmodic action of this disease either ceases instantly, or becomes greatly aggravated by the person laying his head on a piece of cold iron during the paroxysm; and another writer says that by sprinkling the patient with cold water or by merely touching him with a cold hand the same effect will be produced.

Nearly all who have written on the subject say that the cause of this disease is not very well understood. They agree that it is more liable to attack girls than boys, and according to my experience it but rarely attacks males; all the cases that I have treated having been females, and all of them something near the age of fifteen years. It rarely attacks persons beyond the nineteenth year of their age, and not often making its appearance on persons before the eighth year, but there are cases on record as young as the ninth month

As it attacks persons generally between the eighth and nineteenth years (and then generally females,) in four cases out of five it may be produced by the influence which the uterus has over the brain and nervous system.

In certain constitutions I think the predisposing cause is general weakness, and in some instances it has been produced by sympathy on seeing the disease in others. Those with small necks and with extreme muscular feebleness are the most liable to the disease. In such persons the power of volition is feeble. Those persons are generally of a strumous diathesis. Professor Eberle says that the pathology of this disease derives little or no light from anatomical examination, but there are good reasons for believing it to be a cerebral affection. He further says, " that its frequent occurrence is from mental excitement, the intellectual weakness which almost invariably results from its protracted continuance, the suspension of convulsive motion during sound sleep, and its exclusive confinement to the voluntary muscles point directly to the sensorium as the immediate source of irritation upon which the spasmodic action of the disease depends." Unquestionably, however, the cerebral irritation is itself very frequently secondary, depending on a primary irritation located in some remote part of the system, and sometimes perhaps in the alimentary canal. Richter was of the opinion that the proximate cause of this disease was seated in the ganglionic system of nerves, and particularly in the abdominal plexus. He says that it is from this location of primary irritation that the first manifestation of the disease generally occurs in the feet, and that gastric and uterine irritation so frequently constitute its exciting cause; and finally that those remedies which act more especially upon the abdominal viscera are usually the most beneficial.

In nearly all cases the prognosis is favorable when properly treated. It may be almost invariably removed if not long neglected or complicated with some other disease. Occasionally it may be converted into epilepsy, and should this be the case it may prove fatal through the intervention of that affection. The more violent and protracted the paroxysm and with it a debilitated state of the nervous system, the more the mind will become deranged, and the more difficult it will be to effect a cure.

The principle indications in the treatment of chorea are, *first*, to remove the exciting cause; *second*, to invigorate the general system; and *third*, to break up the train of associated action by which the paroxysms are repeated. To fulfil the above indications there have been a host of remedies commended, and among the first, purgatives have been highly recommended by Hamilton of Edinburgh, Sydenham of England, Stark, Unzer, and others. Eberle says, that he treated twelve or thirteen cases according to the plan laid down by Hamilton, but did not in more than two instances derive the advantage from it that he was led to expect. In persons of a nervous temperament, assafœtida, valerian, musk, hyosciamus, camphor, and opium were used to quiet the nerves. Richter gave borax at the rate of twelve grains three times a day with complete success. He also asserts that music has sometimes produced astonishing effects in tranquilizing this disease.

Electricity has been extolled highly; and Fothergill speaks highly of galvanism; and Professor King says, in a majority of cases, a very gentle electro-magnetic current passed through the brain, spine, and affected muscles, will aid materially in hastening a cure. The flowers of zinc have succeeded well in the hands of Richter, Stark, and Alexander. Beddingfield says that thirteen out of fourteen cases treated with it, yielded permanently to its influence. But Professor Eberle asserts that he used it without any apparent benefit, while the sulphate of zinc removed the disease speedily and permanently in one case that came under his notice. The patient, a girl about twelve years of age had already been afflicted with the disease nine months, and had undergone various modes of treatment. A grain of this preparation was given three times a day, and without other remedies the disease disappeared in less than ten days.

The nitrate of silver has been given with advantage by Prof. Eberle when the disease was excited by terror. Franklin and Powel of England, also used it with success. Dr. Elliotson relates eight cases cured by rust of iron. He used the article in very large doses of from a drachm to a half ounce three times a day. Stoll recommends the extract of belladonna, and Professor King gives it in rare cases when there is a tendency to paralysis. Dr. Kennison succeeded with stramonium; Dr. Raven cured four cases by the tincture of colchicum. The black cohosh proved very successful with Dr. Young; and Dr. Kost speaks of it in conjunction with scullcap and assafœtida. . Professor King says the pill of black cohosh may be used; and he generally employs it.

I have given a sketch of the remedies that have proved the most successful in the hands of several physicians. I shall now proceed to give the treatment I have used with great success, after giving the treatment adopted by my father, Dr. Wm. B. Crock, which he used with remarkable success.

℞. Socotrine Aloes, ℥ ij,
Cypripedium, ℥ ij.
Sanguinaria Canadensis, ℥ ss,
Yellow Poplar bark, ʒss.
Rectified spirits, Oij. M.

For a child twelve years old a half tablespoonful was given three times a day, or enough to keep the bowels gently open. In addition to the above, an infusion of cypripedium root was drank freely.

My treatment has also been very simple. I generally commence with a purge composed of the following:

℞. Leptandrin, grs. ij.
Podophyllin, gr. j.
Rhubarb, grs, xxx. M.

as a dose for a patient fifteen years old. Should this not operate, I repeat one fourth the quantity in from three to six hours as circumstances may require until a brisk operation takes place; and after the purge has accomplished its purpose I almost invariably use the following, which acts in a threefold manner, as a laxative, anti-spasmodic, and tonic. I first prepare a saturated tincture of the yellow poplar bark, and let it stand fourteen days and filter until two pints are obtained. To I this add the following:

℞. Cypripedium, ℥ ij.
Podophyllum pelt. ʒj.
Black Cohosh, ℥ ss.
Skullcap, ʒss.
Myrrh, ʒij.
Rhubarb, ʒj. M.

of the above compound tincture I give a half tablespoonful three times a day to a patient fourteen years of age. Should this produce more than two operations I lessen the dose. When the above does not appear to quiet the nervous agitation, I add a half a grain of Cypripedine to each dose.

Sometimes I have found it necessary when the tongue becomes foul, to give the purge recommended above every other night until the coat is entirely removed, giving the compound tincture at intervals between, and regularly afterwards. I have also used the fluid extract of cypripedium in ten drop doses three times a day with marked success. A stimulating liniment applied to the spine will sometimes be of service, as:

℞. Aqua Ammonia, fʒj.
Oil Cajoput, f℥ j.
" Origanum, f℥ j.
Tr. Capsicum, f℥ ss. M.

The surface of the body should be bathed every three or four days. The diet should be nutritious and easy of digestion. Moderate exercise should be taken daily, using friction morning and night with a coarse towel. When the disorder is completely subdued, proper exercise should be taken daily on horse-back for sometime after, to add energy to the system.

CASE REPORTED.

BY ISAAC SMITH, M. D.

A SOMEWHAT singular case occurred in my practice not long since, and I wish to be allowed to report it. May 23rd, I was summoned to visit Mrs. P———, aged 51, who was complaining of severe pain in the head and back, and presented a hot skin, white furred tongue, and other marked symptoms of a febrile state. I at once gave her an emetic and left diaphoretic medicine to be taken at regular intervals. Upon visiting my patient the next morning I found her delirious, and observed an indistinct eruption, which from its appearance and other symptoms, led me to pronounce the disease *measles*. Several persons present appealed from my decision and endeavored to sustain themselves by asserting that she was born at a time when her mother was sick with the measles, and that she then had the eruption distinctly. It was further contended that she had acted as nurse for three or four years where the disease prevailed, and had never been attacked. I, however, adhered to my opinion, and gave remedies that determined to the surface, and continued them through the day. On the next day, May 24th, the eruption appeared perfect, the fever less, and the patient rational. She acknowledged that the disease resembled many of the cases she had taken care of; and all were inclined to yield to the diagnosis. Subsequently, at the usual time a grand-child was attacked with measles, a circumstance that seemed to remove any doubt as to the nature of the malady.

The most puzzling part of the case is this: The lady was exposed to measles *seven weeks* previously to her illness, and not afterwards. Did the specific virus remain latent during this period, and did she have a second attack of Rubeola.

NOTE.—Both of these questions may be answered in the affirmative. Although the *latent* period, or period of *incubation* is generaly from six to fifteen days, it is by no means as fixed as in small pox, or some other eruptive diseases. It not unfrequently happens that twenty-five or thirty days elapse after an exposure before the disease manifests itself. Seven weeks is as long a time for the disease to remain latent as is recorded, yet there can be no good reason why such a period might not intervene under favorable circumstances.

It does not often happen that persons are attacked twice with measles, yet almost every practitioner of considerable experience is familiar with such instances. Mr. Erasmus Wilson, in calling attention to points of difference between scarlatina and measles, says that the latter "frequently attacks the same person twice."

It is not uncommon for a person to pass with impunity several epidemics of measles, and finally, under influences not perceptibly different from those already gone through, take the disease. It is generally supposed that there is a greater predisposition in one individual to certain epidemico-contagious diseases, at one time than another. Just what constitutes that predisposition is not easy to determine. Probably the state of mind, diet, and atmospheric influences, have considerable to do with it. The exciting causes of disease cannot be essentially different during the various epidemics, but a combination of influences may so modify the system as to render it exceedingly susceptible of morbid impressions.—Eds.

CROUP.

BY JOHN BUCHANAN, M. D.

To the reflective and philosophic mind there is no science more pleasing than that of medicine; and none affords a richer field for real progress and substantial results. The American mind seems to be favorably constituted for suggesting means that ensure the most practical and valuable results in the various branches of medical science. Much of our success has undoubtedly arisen from the boldness with which every medical subject, however well established its principles may have appeared to be, has been examined and discussed. No man of a progressive turn of mind belonging to any school of medicine, is willing to implicitly follow the *ipse dixit* of the acknowledged leaders in the *faith*, but he strives to improve upon that which may be already good. Among the diseases that have thwarted the attempts of a great body of the profession to overcome it, is cynanche trachealis or croup. The want of success in the "authorized" treatment does not depend upon a lack of general knowledge of the pathology of the disease, but upon a stubborn adherence for the sake of opposition, to what is assailed.

As has been suggested, the pathology of croup is pretty well understood; too well to need a prolonged recital of the various symptoms given in every work on medical practice. It is well known to be an acute disease of the air passages; more particularly of the larynx and trachea. A little child is rollicking in health at the approach of evening, and in three hours the physician is summoned with the greatest alarm for the same little one who is now struggling for breath. What has done this sudden mischief? Is it spasm of the air passages; preternatural dryness of their lining membrane from an arrest of the normal secretions; or is there a formation of false membrane, an organization of exuded lymph from the inflamed mucous surfaces? All these states may exist, or have been present during this brief period. The constitution of the child from subtle causes had become susceptible of irritation, and a change in the atmosphere, a cold, damp state of it inhaled too profusely during this predisposition, has called into action the croupy condition. The irritation at first produces spasm of the respiratory passages, hence the difficulty of breathing so suddenly manifested as it is sometimes; a continuance of the irritation initiates inflammation, which arrests the secretion that commonly lubricates those pipes; finally the exudation of plastic lymph takes place and blocks up the larynx; or the lymph becomes organized, and forms a false membrane in close proximity with the mucous membrane of the parts inflamed.

During a paroxysm of croup, the sound of the patient's respiration and cough attracts attention and excites no little uneasiness in the minds of the parents. The peculiarity of the croupy sound has given the disease its common name. When the narrowness of the air-passages is considerable, a crowing like that emitted by a diseased fowl, is produced, hence the appellation of croup. As the disease progresses the hoarseness and croupy coughing increase, and great distress is manifested by the sufferer. Febrile excitment is observed in the pulse, flushed countenance, and hot breath. Under such circumstances the patient sooner or later dies in a paroxysm of suffocation, unless appropriate energetic measures be quickly adopted to check the progress of the disease.

Treatment.—This must depend very much upon the variety and stage of the disease. If the croupy attack be the simplest form of the complaint, the Acetic Syrup of Sanguinaria recommended by the late Prof. I. G. Jones, administered in repeated doses for a few hours, proves sufficiently active to subdue the disease. So effectual is this remedy in most cases that it may with propriety be called a *specific* in croup. Among the adjuvant modes may be mentioned; bathing with warm lye-water twice a day; the neck should be packed, or fomented; and the bowels and kidneys may be excited to action with stimulating cathartics and diuretics. Enemata, however, are commonly as useful as cathartics, and they leave the system in a better condition. The action of the heart in cases of much arterial excitement, ought to be restrained with appropriate sedatives.

The syrup of sanguinaria has, as suggested above, been found efficient in loosening and expelling the muco-plastic phlegm, and preventing its organization. Once formed, however, it can have little effect of a favorable character upon the membrane for weak acids are known to harden false membranes and low forms of organization, while alkalies dissolve them. Hence, when it is certain that a false membrane has formed in cases of croup it will be best to withold the acetic preparation and administer some form of potassa; and the most reliable in this disease, is, perhaps, the bichromate, which may be given in the sixteenth of a grain doses, and repeated every twenty or thirty minutes until free emesis takes place, and the patient is relieved. It is yet to be shown that the bichromate of potassa will not relieve more cases of membranous croup than all other known agencies together.

Membranous croup has been considered one of the most fatal diseases that attack the infant. Collins and Bell state that at least two-thirds of the cases terminate fatally; and Dr. Ware, of Boston, found of the twenty-two cases of membranous croup observed by him, that there were nineteen deaths. On account of the fatality of membranous croup treated according to established authority, the operation of tracheotomy was instituted as a *dernier* resort after failures by medication. But such bold measures have not given the satisfaction at first expected of them. In a late discussion of the members of the *Academie Royale de Medecine*, of Paris, it was elicited that of one hundred and forty cases of tracheotomy, for the relief of croup performed by M M. Amusat, Blandin, Bretonneau, Trousseau, and Velpeau, there were *one hundred and twelve deaths*, and only twenty-eight recoveries. In 1841 tracheotomy was performed nine times at the Children's Hospital of Paris, and with as many deaths. In this country not much better success has attended the operation in cases of croup. "In Philadelphia," says Dr. Casper Morris, "the operation has been uniformly without success."

Dr. Storer, of Boston inquires, without recieving an answer, of the members of the society for Medical Improvement, "whether Tracheotomy had ever been successfully performed in that city in membranous croup?"

With such fearful facts before us can we hesitate to attempt other measures than those in common use with the great body of the profession? If two-thirds of the cases of membranous croup terminate fatally when treated with venesection, hydrargyrum, and antimonium, and at least three-quarters of the cases of tracheotomy result in the same manner, can the advocates of this deadly practice condemn an *irregular* course which shall save three quarters of similar cases? But they will say such results cannot be obtained from treatment no more heroic than that advised in this article. We, however, who have made use of it, know it, and respectfully call attention to our success.

INFLAMMATION.

BY PROF. A. J. HOWE.

It is so difficult to comprehend the essential qualities of inflammation, however easy it may be to understand the various manifestations of its action and progress, that Mr. Paget, while speaking of the "Phenomena of Inflammation," in his 'Surgical Pathology,' (page 192) says: "I shall not attempt to define inflammation in any set terms; for as yet we are not, I think, in a position to do this. Just definitions cannot be made in any science till some of its broad and very sure principles have been established. Such principles we cannot boast to have attained in the study of pathology; and the attempts at precise definitions that have been made hitherto, seem to have led to confusion or to false and narrow views of truth. Besides, to define inflammation is the less necessary, because, practically, we all know sufficiently well what the term implies. The very difficulty of exactly defining the process of inflammation may be our guide to the most hopeful method of investigating it. When we see such gradual transitions from the normal process of nutrition to the disease of inflammation that we cannot draw a definition line between them, we may be sure that the main laws of physiology are the laws alike of the disease and of the healthy processes; that the same forces are engaged in both; and that, though interfered with by the conditions of the disease, they are not supplanted or annulled."

We are, furthermore, informed by a class of writers that, "inflammation is a *physiological* condition set up for the removal of *pathological* states;" and that it is merely a 'symptom' of disease, and always healthy in its character. To illustrate the point our attention is directed to the process, the irritation, the effusion, the excited action, and the suppuration,—by which a splinter broken off under the nail, is expelled. But it seems to me that the *perverted vital action* excited by the splinter constitutes a state of the parts which according to the ordinary acceptation of language, deserves to be called pathological. Though the changes takes place in the living body under the influence of physiological forces, such departures from the normal healthy condition are so extraordinary that they should be considered morbid in character. During the repair of an external wound by granulation the natural recuperative forces of the body are called into action, which uninfluenced by extraneous causes would be purely physiological; but these forces are modified by irritated nerves, an obstructed circulation, vitiated effusions, and chemical changes, to an extent that deprives them of results characteristic of simple healthy developement. This modification of the recuperative forces constitutes the disease. Pathology is defined as the physiology of disease, and in that sense inflammation may be denominated by those fond of quibbling, physiological. But as the contest of words has elicited no new ideas of the proximate or essential qualities of inflammation; and as all continue to treat inflammatory action with antiphlogistics, it is presumed that a further discussion of the subject would be profitless.

There is a common notion that inflammation is absolutely necessary to the repair of injuries, yet it is one that needs modification. Although it be the usual concomitant of the reparative process, the vital forces most readily effect the restoration of injured and lost parts without the influence of inflammatory action. There is pretty conclusive evidence that the wounds of animals of the lowest orders will heal without inflammation; and it is quite certain that our own tissues will heal in a similar manner when shielded from the oxidizing influence of the atmosphere. The "immediate union" of the surgeon which is affected without the intervention of any new material, is an example of such an action. Union without inflammation takes place, too, by the organization of plastic lymph interposed between two closely approximated wounded surfaces. In what are called plastic operations a high grade of inflammation thwarts the efforts of the surgeon. So does the inflammatory element tend in all other surgical cases.

Inflammation is a term, though purely metaphorical, coming from *in*, 'within,' and *flamma*, a 'flame' or 'fire,'—that has become naturalized in science, and is therefore the most fit one to express certain phenomena in the body characterized by, *rubor et tumor*, *cum calore et dolore*,—redness and swelling, with heat and pain. These phenomena may be manifested externally in the solids—*morbus externus*—when they come within the domain of surgery; or one or more of them indicate changes going on in the fluids, constituting the *fever* of the physician.

Concerning the essential qualities of the latter condition, or fever, there has been an endless controversy, and if I were to throw down the gauntlet of discussion, I should entwine myself in the same interminable maze. Therefore, as it does not come within the province of my labors I shall leave the subject to those who are able and willing to support their favorite theories. Viewed in whatever light, the subject of inflammation will ever form a topic of paramount importance to the practitioner. Mr. Travers, in his treatise on the "Physiology of Inflammation, and the Healing Process," has well said, "that a knowledge of the phenomena of inflammation, the laws by which it is governed in its course, and the relations which its several processes bear to each other, is the keystone to medical and surgical science."

Although almost all morbid conditions depend upon existing or preceding inflammatory action, there are certain diseased states that seem to have little or no connection with it. Some of the forms of hypertrophy and atrophy may arise simply from disordered nutrition; the increased secretion of certain glands, as the kidneys under the influence of natural stimuli, and accumulations of fluid in shut sacs constituting dropsies, cannot always be traced to inflammatory action immediate or remote. If however, the various nosological tables be run over, it will be seen that inflammation plays an important part in most of the medical and surgical diseases.

A better understanding of the nature of inflammation can, perhaps, be obtained by comparing its effects with those of the normal process of nutrition. The common impression is that in an inflamed part there exists *an increase of formative power*, *or vital force;* but we shall find upon examination of the subject, abundant evidence, though the productions be of exhausting and final inflammations in tuberculous and cancerous diseases, and granular degeneration of certain glands, that there is a diminished or suspended nutrition in the tissues of an inflamed part. The *quantity* of organic power seems to be lessened, and the tissues suffer from disintegration and that kind of absorption of the natural structures which implies a previous degeneration of the parts absorbed.

We observe that the size and weight of an inflamed part are increased, and in part by the formation of organized matter; but the material formed presents only the lowest grades of organization, and there is scarcely vitality enough in it to resist chemical decomposition and local death as long as the inflammation lasts. The latter action once subdued however, there may be a restoration and increase of the normal structures, and a diminution of the previously formed inflammatory products.

All are aware that the lowly organized structures, such as fungous and malignant growths, have not vitality, or formative power enough to resist the action of weak caustic agents; yet the reproductive power of the parent cells is so great as to show the most rapid increase when the blood and all the natural tissues are wasting, and life is at its lowest ebb. There is, therefore, an excess of material exuded from the vessels during the inflammatory process, more than would be demanded for the ordinary nutrition of the part, but there is too little vitality present to secure the healthy development or assimilation of it, or even to oppose the destructive tendencies existing at the time. It is to be understood then that inflammation is not an increase of vital action, but when it is present there is a decrease of it; and the severer and more continuous it is, the more fatal will it be to the parts implicated. In the reaction that follows certain inflammatory states, it may seem as though there had been an excess of vital action and nutritive assimilation, but if the inflammation returns, or other inflamed states be closely observed and compared, it will become strikingly apparent that the natural formative process is really diminished.

Phenomena of Inflammation.—Notwithstanding the diverse opinions that are held concerning the essential qualities of inflammation, all are pretty well agreed as to the nature of the changes that are made manifest during the active stages of an inflammatory process.

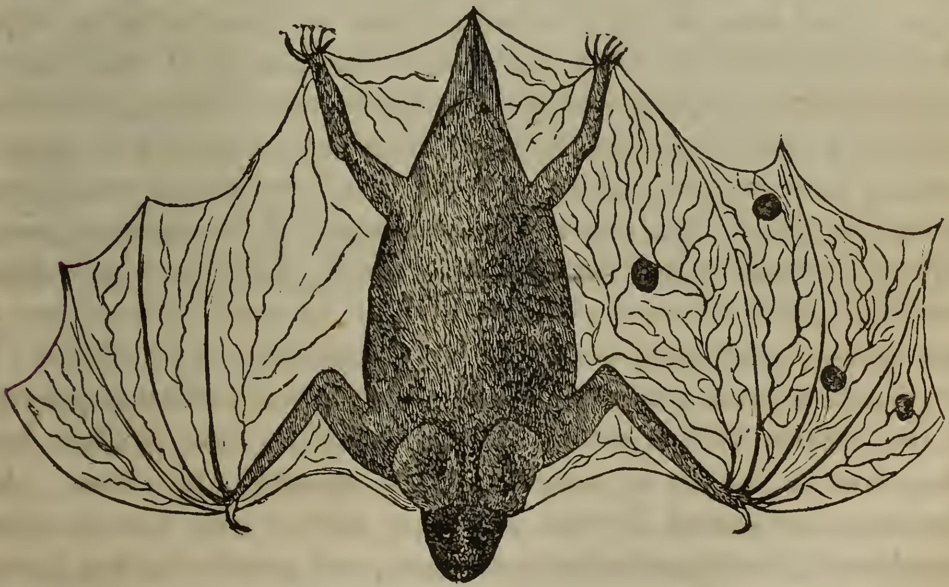
It is found by various examinations conducted with the microscope, and under the most favorable circumstances, that, when a stimulus or irritating agent is applied to a living animal tissue, the vessels, especially the arteries, take on unusual contractility, which lasts for a period varying according to the strength of the stimulus and the nervous susceptibility of the part, and then they begin to dilate, and continue in that condition until the size of the vessels is so much increased that they will transmit two or three times as much blood as they ordinarily do. Although this is contrary to the commonly received opinion, which is that the vessels take on an increase of calibre and activity as soon as the stimulus is applied, the fact that contraction takes place is nevertheless sustained by the later observations of Weber, Lebert, Paget, Virchow, Wharton Jones and others. In the ordinary passage of the blood through the capillaries the corpuscles move in single file or with a slight deviation from it; during an irritated state of the same vessels no blood passes, and it remains stagnant; but after the irritation is removed the same vessels dilate and allow the corpuscles to pass in double and triple files, manifesting in the termination a disturbed function as marked in character as was presented at first by the temporary stagnation. In circumscribed inflammation there are all varieties of these changes going on. While a central portion of the inflamed vessels may remain in the contracted state, at its borders or in the less irritated parts dilitation would be taking place and a greater amount of blood than usual would be flowing through the affected part.

There are, however, certain structures when affected by inflammatory action that will not admit of all the changes referred to. These are the non-vascular tissues, as the cornea, the articular cartilages, and even the serous membranes; yet in the immediate vicinity of such structures the bloodvessels from which is derived the nutritive material and through which the ordinary vital changes take place in a state of health, are influenced in the same manner as in other inflamed structures; and it would be unreasonable to call the process leading to ulceration of the cornea, or diseased articular cartilages, by a name different from that which we give to the coincident and similarly excited process in the other tissues.

To demonstrate some of the changes that take place in an inflamed part, Mr. Hunter froze one of the ears of a rabbit and allowed it to thaw in a way that was followed by active inflammation. When the abnormal action was at its height the animal was killed, and the head having been injected the ears were removed. These being spread out and examined, it was observed that certain changes had taken place in the one that had been inflamed. From the increased size of the vessels in the ear which had been frozen, is was inferred that inflammation increases the calibre of the vessels primarily, as well as for a season; and from his imperfect experiment and ill devised hypothesis many fallacies crept into the general ideas of the inflammatory process. The effect of the cold upon the ear should have been observed from the commencement of the freezing process, as well as the effect of the inflammatory element when it set in. Instead of which only the secondary effects were observed.

In addition to the experiment of Mr. Hunter, several others have been performed upon the web of a frog's foot and the delicate membranes of other cold blooded animals, for the purpose of eliciting a right understanding of the nature and manifestations of inflammatory action. Mr. Paget, not satisfied with experiments made upon cold-blooded animals, the objection being raised that it was not safe to apply conclusions drawn from them to the case of warm-blooded animals, employed the ears and wings of bats, "in which (when one has acquired some art in quieting the animals with chloroform, or gentle management) nearly all the phenomena of the circulation, as affected by the application of stimuli, may be watched as deliberately as in the frog, and in some respects even more clearly."

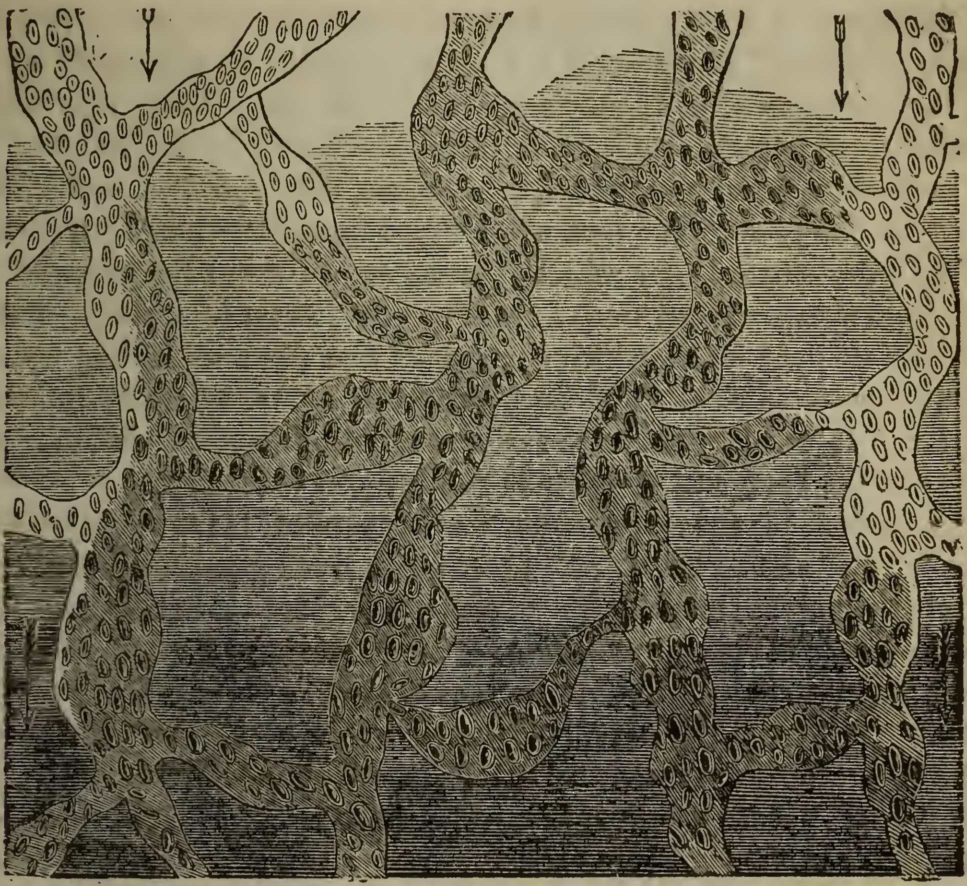
Following the suggestions of the author just quoted I applied to the spread wing of a bat fastened head downwards—a common way for the animal to suspend himself—upon a window pane, a red hot needle in several places, and observed with the aid of a pocket lens the effect upon the vessels distributed to the parts irritated. Around the focus of the injury very soon after applying the needle, the wing seemed to take on vascularity. An endless multiplication of vessels appeared in the interphalangeal space. Upon applying it in another space, and watching it more closely from the first, the blood which was seen flowing rapidly in the arteries and veins of the transparent skinny membrane, began to move more slowly, and in the vicinity of the



This diagram shows the seemingly multiplied state of the vessels in the wing of a bat which has been punctured with a hot needle.—(After nature,) burn to become temporarily stagnant. In the crossing and anastomozing vessels complete stagnation occurred close to the injury, and the coats of the vessels took on an aneurismal or varicose condition. At a little distance from the centre of injury, momentary contraction took place in the vessels, and then a somewhat permanent state of dilitation succeeded, allowing much more blood than usual to pass. No increase of vascular action was noticed in the opposite wing. While noticing the state of the burnt wing from day to day it was observed that the blood in the stagnant vessels began to move from time to time in the capillaries, gradually approaching the points of injury until every vessel except those which were charred, transmitted its usual fluid, and in streams not above the size of those that flowed before the harmony of the parts was disturbed. At the end of ten days the only difference to be observed in the two wings was the puckering effect of the cicatrices, and the little more wavy character of the principal artery and vein.

To repeat the experiment of Mr. Paget, if a fine needle be drawn across the companion artery and vein of a bat's wing three or four times without injuring them or the membrane that covers them, they will in a short time, if the movement of the blood be watched, be perceived to gradually contract and close. But the blood will only remain stagnated a few minutes, for the vessels, after holding themselves contracted a short time, will begin to dilate moderately, and continue until they have acquired a larger calibre than they had before the stimulus was applied. The effect is most marked in the arteries, though the veins are not without the contractile force. If the needle be drawn across the vessels oftener and more forcibly, no contraction of any account ensues, and what does is quickly succeeded by dilitation. By this process so great a degree of local nervous exhaustion is produced that the vessels need a strong stimulus, such as that of great heat, or a corrosive liquid, to excite them to contract and close. And when once contracted in this way, they need a long time to unload themselves of the agglutinated corpuscles, and permit the free flowing of blood through them.

Several important facts seem to be elicited by these experiments. First, that in local injuries the nerves are primarily effected, which in turn influence the muscular coats of the vessels, and the effects upon them are made manifest by the movement of the blood. As the vessels are contracting, the blood flows more slowly, or begins to oscillate, and if the stimulation be kept up, or increased, complete stagnation takes place in a greater or less number of vessels. The stagnation commences in the capillaries; and first in those which are least in the direct course from the artery to the vein; thence it extends, according to Mr. Wharton Jones, to the veins and to the arteries. In the focus of the inflammation there are most capillaries with stagnated blood in them, and the principal artery may be observed pulsating with every action of the heart; its current not being possible in the usual and most direct channels, is forced to pass off through collateral branches. The stagnated blood does not coagulate readly, but its corpuscles seem to change their hue either through vital or chemical action or position, and take on a brilliant carmine appearance. The aggregation of the corpuscles in the contracted vessels, and the increase of number passing the dilated vessels, serve to increase the redness in an inflamed part.



This diagram represents the microscopic appearance of the capillaries in an inflamed tissue. In the lowest part of the picture nearest the focus of inflammation, the vessels are constringed: higher up they are seen dilated into pouches, and distorted. In the darkest portion the blood is stagnated; and effusions of serum and lymph have taken place into the intervascular spaces.—[From nature.]

Any one can satisfy himself that there is an accumulation of sanguinious fluid in and about an inflamed surface, and that the blood does not ordinarily coagulate in the part, by cutting into the inflamed tissues. Much more blood will be found to flow from the cut surfaces than from an incision into the healthy tissues in a corresponding place in an opposite part of the body.

BARK OF THE COTTON ROOT AS AN ECBOLIC.

BY B. C. SMITH, M. D.

In the administration of any medicine with the view of ascertaining its degree of action on the system, or specific influence over any certain portion of it, we should note the quality of the agent used and the condition of the person subjected to the experiment, also other circumstances which might have material bearing in the results.

I collected a lot of cotton root in Autumn, after the frost had killed the top of the plant. The root was washed immediately and permitted to dry in the shade, after which it was kept in a bundle wrapped in thick brown paper about twelve months. A quarter of a pound of the bark was stripped off, to which was added two pints of boiling water, the vessel covered closely and kept warm two hours, when the infusion was found to be highly colored and strongly impregnated with the properties of the bark, and the patient commenced to drink it.

The subject of the experiment was a married lady, twenty-seven years of age and in her fourth pregnancy, having reached about the end of the seventh month. There was nothing very notable about her temperament, habit or occupation. The fœtus had been dead three weeks, and putrifactive absorption was rendering the condition of the mother perilous. Both parents were affected with constitutional syphilis, which may account for the death of the fœtus.

The above infusion was taken by this patient during twenty-four hours, without the use of any other means calculated to induce labor. At the end of the time the os uteri was found to be hot, thick and resisting, remaining firmly closed. The contractions of the womb had evidently been very slight, though feeble pains were generally felt a short time after taking a draught of the tea; yet labor had made no discoverable progress. The condition of the patient not being such as to warrant further experiment, I made direct application of Belladonna ointment to the os. In seven hours I returned and found the patient refreshed by a quiet slumber. The mouth of the womb was very yielding; the end of the index finger could be introduced without difficulty. After passing a bougie around between the membranes and internal surface of the uterus, the distance of about two inches and making a small rupture in the membranes by puncturing them with a probe, I found the os quite dilatable, and gave infusion of ergot freely. As early as possible, (fearing the powerful effects of the ergot,) I excavated the fœtal head and brought the collapsed skull into the mouth of the womb to assist, mechanically, in its dilitation.

Thus the delivery was accomplished with safety in less time than was occupied in the experiment with the cotton root. Now I conclude that cotton root will not, under all circumstances, induce, "Uterine contractions equal to ergot" or "produce abortion with certainty and safety."

If those who have ample opportunity would make critical experiments and report them accurately we might soon become as well satisfied in regard to the action of cotton root, as that of jallap or opium.

A RARE CASE.

BY J. M. LANSDOWN, M. D.

On the third of April last I was called to see the infant daughter of Mrs. W——, which was laboring under an attack of Pneumonia. Her age was one year and ten months; of a delicate constitution and decidedly nervous temperament. On inquiry I learned from the mother that three days after the birth of the child a peculiar vaginal discharge was discovered which resembled exactly the menstrual flow of adult females. It lasted five days, and four weeks subsequently it was re-established; and it continued to return at regular intervals of four weeks, until the child was nine months old, when it was much debilitated by a severe attack of sickness which continued three months, during which time no discharge was seen, but as its health and strength were recovered the discharge was again established and continued returning every four weeks until its present sickness.

Having never seen a similar case I was somewhat at a loss to determine the best mode of medication. After the active symptoms of pneumonia, under which the child was then laboring, were subdued by the use of the ordinary means instituted in such cases, I adopted the following plan of treatment. An active diuretic was administered, believing that much might be accomplished by elimination from the kidneys. In the urine that was discharged a few hours afterwards there was about a drachm of a peculiar reddish brown deposit resembling sand. A similar sediment continued to be deposited for three days but in greatly diminished quantities.

I then gave the following formula:

℞. Ferri Carb.,
Quinia, Sulph., āā grs. x. M.

and divide into twelve papers, one to be taken every three hours.

This was continued for ten days when the Prussiate of Iron was given in place of the carbonate, in the same proportions, but only four times a day. This has been continued since the 20th of April with slight variations to meet existing symptoms, and the little patient has continued to improve, and up to the present time has had no return of the vaginal discharge since about the time of my first visit.

Query. What was the cause of the discharge? Was it occasioned by disease of the urinary organs, or was it what it so much resembled, *catamenia?*

VINEGAR IN UTERINE HÆMORRHAGE.

BY PROF. CLEAVELAND.

On the 6th of July I was called to see a lady who had been suddenly attacked with profuse uterine hemorrhage, with a constant pressure in the rectum, producing a feeling demanding defecation but not resulting in any passage from the bowels.

The *gush* of blood had rendered her nearly bloodless, with a feeling of faintness and nausea. At once I ordered an ice water injection per rectum, well acidulated with vinegar. I gave the patient to drink ice water, quite acid with vinegar, *often* and freely. I applied napkins over the abdomen wet with vinegar, and between the folds of the napkin I had small pieces of ice.

As soon as it could be prepared, I gave the patient freely to drink of a strong infusion of cinnamon bark, rendered quite cold with ice. The hemorrhage ceased almost immediately; and with but little other treatment, the patient left town the next morning.

Want of space prevents a full explanation of the *rationale* of the treatment adopted; but the anti-putrefactive, astringent, styptic, and cooling properties of the vinegar are well known, and it could be procured immediately, while the patient might die while other agents were being obtained.

EDITORIAL DEPARTMENT.

GALVANISM IN TOOTH EXTRACTING.

In noticing the Patent Reports in November last, referrence was made to several purposes for which Electricity had been brought into use in the practice of medicine and surgery, with the remark: "We see nothing in these reports in relation to the application of galvanism to the forceps in the exhaustion of teeth, and conclude that *that* has not as yet been patented."

This subject has attracted some attention, and the "Franklin Institute," and "Pennsylvania Association of Dental Surgeons" have appointed committees to investigate the matter. The Franklin Institute Committee have reported, but that of the Association of Dental Surgeons has not been made public.

The apparatus necessary is the ordinary magnetic or galvanic battery, the negative pole of which is attached to the extracting forceps by means of a hook at the end of the tissue cord or wire, which is made to pass through a hole drilled in one handle of the forceps, so that the electrical current shall pass from the tooth through the forceps and wire or cord to the instrument. The other pole of the battery is connected with the patient by means of another cord or wire and a metallic handle which completes the circuit as soon as the forceps come in contact with the tooth or gums.

It is well to have the cord or wire from the machine to the hand *interrupted*, but so arranged by means of a foot board, that the circuit can be completed by pressure on the foot-board, and that the current be *not* allowed to flow until the forceps grasps the tooth ready to be extracted, As it has been observed that the current does not paralyze the sense of pain when it has been applied a little length of time. Only the shock of its application and the *immediate* loss of sensation seemed to answer the purpose completely.

The hand of the operator which grasps the forceps, should be clothed with a silk or kid glove to prevent his receiving a part of the current, and the one which removes the cheek from the tooth, should also be protected by the folds of a napkin.

One of the Committee appointed by the Franklin Institute, says; "Most persons suppose there is a *shock* experienced on its application, or that it is painful to the tooth; these objections are not correct.

"We applied it in many cases and the pain was considerably less than in the ordinary way, in all except one case." * * "Some patients ask, when they observe us leave the mouth, whether we have taken out the tooth or not, as they are not sensible when the tooth left the socket, although they know that we had put the forceps on the tooth, and that an effort at extracting had been made."

The Committee report at length, and from that report we make a brief extract.

"One hundred and sixty-four teeth were extracted in the presence of the committee.

The committee are satisfied from observation and the experience of its members, that in a large majority of cases of extraction with this apparatus *no pain whatever* is felt by the patient."

One of the most disagreeable difficulties to be overcome by the practitioner in tooth-extracting, is the *fear*, *dread*, or *terror* of the patient, and the use of the electrical current in most cases does away with this completely and patients quietly submit to have tooth after tooth, or fang after fang removed, with a degree of placidity and unconcern that is greatly to the relief of the operator.

The *exhaustion* or nervous depression which often follows tooth-extraction without the use of an anæsthetic, does not obtain when the galvanic apparatus is used; and there is no fear on the part of the patient or operator, which has so often prevented the use of chloroform and other anæsthetics.

Many are accustomed to separating the gums from the tooth by means of a gum-lancet, and in some cases the patient has spoken of the application of the lancet as productive of as much pain as the extraction of the tooth; but *that* pain can also be obviated by attach- the machine to the lancet in the same way as to the forceps, during the act of cutting.

There has been a patent obtained for the use of this agent, but this has not deterred persons from giving it a trial, and thus far all reports are favorable to this mode of obliterating or lessening the pain of tooth-extracting.

FEMALE STUDENTS.

The propriety of admitting females to all the lectures of the College has long been a matter of consideration among the Faculty, and at a meeting held July 15th. the following resolution was unanimously adopted:

Resolved, That females be not admitted to the lectures of the Eclectic College of Medicine during the Winter term; and that their attendance be confined to the Spring session, during which they will be enabled to enjoy greater advantages, and avoid the inconveniences of the winter course.

It is well known that our students are admitted to the Commercial Hospital upon the same terms as those of other Colleges, but by the action of those having the matter in charge, females were excluded; and as the lectures of the college are suspended during two half days in the week while the students are attending the Hospital clinics, the females were compelled to lose one day's lectures every week. This has been the cause of much complaint on the part of our female students, and alone was deemed sufficient to lead to the action of the Faculty.

Besides, there are many things connected with an attendance upon the winter course that are unpleasant to female students. At that time the females are comparatively few in number, and among a large class of young men there are always some who without any serious intent, are willing to turn anything that is susceptible of being distorted from its original meaning, so that it may become annoying to those whose presence in a Medical College is by them considered an innovation.

There are many young men who are averse to attending medical lectures in company with females, and as the number that are thus kept from matriculating with us will far exceed the few of the opposite sex who may desire to attend, it was decided that the interests of the College demanded that this barrier should be removed.

There are in successful operation Medical Colleges designed especially for the education of females, and we think that the interest of all concerned will be enhanced by advising such females as are desirous of obtaining a medical education to attend those schools.

It is expected that this change will prove satisfactory to all. Females can, during the spring term, receive as thorough a course of instruction as is given in the winter, without being compelled to endure the inconveniences that are unavoidably connected with the winter course.

It will therefore be understood by those students who may have designed to attend lectures during the coming winter at the Eclectic College of Medicine, that there will be *no females admitted during the winter session.*

We would in this connection call the attention of students to the facilities presented by the College for acquiring a medical education. Large additions have been made to the anatomical, pathological, and surgical departments, consisting of a French manikin, plates, skeletons, dried preparations, and morbid specimens, so that we are better prepared to give a thorough, full, and efficient course of lectures than ever before. The opportunites for the study of practical anatomy are ample. Materiel is usually plenty, and is furnished to the student at a nominal price, simply sufficient to cover the cost to the demonstrator. The lecture rooms, and those used for dissection, are conveniently arranged, well ventillated, and everyway prepared for the welfare and comfort of students.

EDITORIAL ABSTRACTS.

Urethral Absorption.—Prof. Crawcour of New Orleans has instituted a variety of experiments to ascertain what parts of the urethra are most suscepitble of absorption, and what constitutional effects may be produced by the introduction of certain remedies into the urethra. He has employed morphia and atropina mixed with cerate and spread upon bougies, to induce narcotism; and in every instance when the agents were introduced as far as the prostatic portion of the canal the most intense narcotism ensued. It was after repeated experiments that the most susceptible portion of the urethra to these agents was ascertained, and that the absorbing power does not reside in the whole urinary tract. Thus, if a bougie smeared with morphia cerate, be introduced into the urethra four or five inches, or as far as the prostate, and allowed to remain however long, no narcotic influence is perceived; but if the bougie be passed an inch and a half further, or as far as the neck of the bladder, the most rapid narcotism ensued. Also, if a sedative solution be thrown into the bladder, very little, if any of it was absorbed. The whole showing that the mucous coat of the bladder and the spongy and membranous portions of the urethra do not possess much absorbent power. But the neck of the bladder and the prostatic portion of urethra have residing in them this elective power in an eminent degree.

Dr. Crawcour thinks these facts may be found useful in cases of mania and delirium tremens, when it might be necessary to narcotize the patient against his will. The plan also suggests an efficient manner of reducing inflammation of the prostate, and irritability of the neck of the bladder.

It was shown by the experiments that only a small amount of morphia or atropina was necessary to excite even alarming manifestations of narcotism, therefore a due amount of care is needed in bringing to bear the influence of powerful agents. A patient will not endure so much morphia or atropina applied to the prostatic portion of the urethra, as by the stomach, or endermically.

Sulphate of Cinchonia.—Of late much has been written in regard to the Sulphate of Cinchonia, as an anti-miasmatic agent.

Recently Prof. Porcher of Charleston, S. C., has made a trial of it in the Marine Hospital of that city. He used it in the following formula :

℞. Sulphate of Cinchonia, grs, x.
Sulphate of Morphia, gr. $\frac{1}{8}$.
Arom. Sulph. Acid, gtts. x. M.

for a dose ; to be repeated three times a day.

From the 10th of last October, to the 17th of May he had treated fifty-one cases, all of which recovered.

They were all treated with the medicine prepared as above, and with a Dover's powder at night and mustard to the abdomen and spine occasionally. He says:

"Sulphate of cinchonia quite sufficient, (so far as the observation of these cases, and the examination of the excretion in fifteen cases at three stages show) differs from quinia, in being less of a sedative ; never acting on the cerebral nervous system to the extent of producing ringing in the ear, lowering the pulse, or other unpleasant symptoms, save the cessation of the chill, the depuratory influence referred to, resulting from the quantity given above, and the general tendency to recovery, I am surprised at the absence of other visible effect. After the most particular enquiry from patients and nurses I cannot ascertain that it either constipates or purges."

We have frequently referred to cinchonia and quinia and urged our readers to give them a full trial. All, or nearly all who have used them speak of them favorably.

Perchloride of Iron.—This salt may be made *dry*, by digesting an excess of dry sesqui-oxide of the metal in chemically pure hydrochloric acid; pouring off the clear liquid, and evaporating this liquid until the salt will solidify on cooling. It should be kept in closely stopped bottles ; and a solution of it can be made at any time as required for use, as it is liable to decompose on keeping, if exposed to the air.

This sesquichloride of iron is often used as an astringent and styptic to arrest hemorrhage, and more recently to coagulate and solidify the contents of aneurismal sacs.

In French Pharmacy it is used of the strength of *four* parts of the salt dissolved in *twenty-one* of water, as if made weaker it looses its power of coagulating the blood. Dr. George Suckley has reported cases he witnessed at La Pitie, where it was used for the *radical cure* of *varices.* The veins were greatly dilated, and four or five drops of the solution prepared as above was injected into the vein by means of a syringe so constructed that the piston was pushed forward by turning a screw, thus regulating the amount of liquid injected. Coagulation followed almost instantly, and the final result was very satisfactory.

In injecting veins with the solution it is necessary to compress them on the cardiac side of the varix, to dilate the vein well, and to prevent the escape of the solution into the general circulation; and even with this precaution there is great danger attending the operation.

It has been made use of to put a stop to the oozing from the smaller blood-vessels which obstructs the view of the surgeon and weakens the patient, in the removal of cancerous and other tumors. By wetting a sponge with it and wiping the surface, annoying and exhausting hemorrhage can be almost instantly controlled.

Potassio-Tartrate of Iron in Syphilis.—In the last number of the College Journal we made reference to Ricord's commendation of this preparation of iron. Since then we have observed the Lancet has fully endorsed the favorable opinion advanced by M. Ricord.

Cerebro-spinal Meningitis.—Dr. Craig denominates the epidemic, sometimes called "Brain Fever" by this name. In regard to *treatment*, he says: "Depletion in any form is not only mischievous but absolutely dangerous, for we have observed in every case that the administration of the mildest cathartic has been followed by an alarming prostration. * * * * * *

As for blisters, though they seem to be indicated, I have never seen any effects from them that were salutary, but on the contrary have often seen them productive of great irritation and restlessness."

He says. "Give opium to quiet pain, quinia to stop the periodicity of the disease, with brandy and nourishing diet to sustain the sinking powers of nature."

Fluid Extract of Wild Cherry in Glycerine.—F. A. Figuored proposes to make a preparation of wild cherry bark with glycerine by taking *eight ounces* of the ground bark and moistening it with two ounces of pure glycerine and sufficient cold water, and allowing the bark to macerate twenty-four hours. Then by displacement obtain thirty fluid ounces of the infusion, to which *six* ounces of white sugar is to be added. This produces a very elegant and valuable preparation.

MISCELLANY.

TREATMENT OF VARICOSE ULCERS.

The laboring and enfeebled classes are subject to *venous* or *varicose* ulcers of the leg. Generally speaking, they are a purely local affection, depending upon an interrupted circulation.—The crural veins lose their tone, become distended into pouches, and take a serpentine course along the leg and thigh. The valves are unable to perform their functions in the dilated vessels, and the blood is thrown back upon the capillaries, the nutrient process is vitiated, and an ulcer results. Every practitioner is more or less familiar with the varieties that attend such affections. The ulcers may vary from the size of a split-pea to a sore enveloping the entire circumference of the leg; they may be superficial and cutaneous, or extend to the bone; they may be phagedenic, irritable, or indolent and stationary. Arising from whatever source, and assuming whatever conditions these varicose ulcers are commonly amenable to treatment. Many patients believe that they are salutary, and could not be healed without great risk to the general health, and practitioners are sometimes found who in some degree sanction silently or otherwise, this unfounded, and now nearly obsolete prejudice. It has been hinted that those who most cherish this absurd notion are unfortunate in the management of the disease.

Treatment.—This consists in giving artificial support to the limb by the proper application of bandages. It is common for the unskilful in such matters to urge the application of unguents, and "drawing salves," of which every old woman has her specific.

All who understand the principle of cure do not hesitate to pronouce equable pressure the chief agent to be employed; and the comparative success of each depends mainly upon his adroitness and skill in applying the bandage so it shall press upon all parts of the limb equally.

The application of a bandage is too often looked upon as an easy and simple operation which may be safely entrusted to the patient; hence the want of success with those who do not take this part of the treatment into their own hands. It has been frequently remarked by experienced surgeons that few operations are more difficult to perform, or require more painstaking than the proper application of a bandage to the human leg. Every part of the limb from the toes to the knee, especially the hollow between the heel and the inner and outer maleoli, should receive equal and abiding support. If the bandage be applied in a careless, irregular manner, it does more harm than good. If it be tighter at one point than another, the parts below will become swollen and œdematous ; and on removing the bandage there will be seen deep fissures where one edge of it had been unduly tight, and a puffiness in other parts where as much pressure was not maintained, all of which conditions interfere with the healing process, or actually prevent it. The best material to envelope the limb in the treatment of ulcers is the *flannel* bandage, and as it is necessary that a clean one be applied every day the patient should be supplied with two, each being washed and used on alternate days.

A flannel bandage for the leg ought to be from six to eight yards in length according to the size of the limb, and be exactly two and a half inches wide after it is washed, consequently if made from new and unwashed flannel it must be two and three quarter inches wide. The bandage is much the best when taken from an entire piece, without a single joining. Flannel is more elastic, and less likely to slip than cotton or linen, and it keeps up a more equable temperature in the limb, which is of some importance in the treatment. In the application of the bandage a compress should be laid in the depressions below the ankle on each side.

If the limb be kept well bandaged no application directly to the ulcer is absolutely necessary, yet it may be well early in the treatment to cauterize the hard edges of the ulcer with nitric acid, and apply to the sore a piece of linen spread with simple cerate, in which is rubbed a few drops of creosote to correct the fœtor. Instead of the cerate, pulverized charcoal, or prepared chalk may be dusted into the excavation of the ulcer, and a bit of linen laid over this before the bandage is applied. No venous, chronic ulcer will fail to heal under this treatment in a few weeks. It is essential to a rapid cure that the patient abstain from debauchery during the process of cure, and afterwards, to prevent a return of the disease. Poultices and fomentations, unless the ulcers be irritable, are positively injurious. Astringent washes to the leg, as lead water, and dilute tincture of iron, or a strong decoction of oak bark, have proved serviceable in the treatment of varicose limbs. After the ulcers are healed, some continued artificial support, as laced or elastic stockings should be worn.

ANODYNE SUPPOSITORIES.

In cases of severe pain after operations upon the viscera of the pelvis in either sex, and especially in difficulties of the male genito-urinary organs ; as in cases of retention of urine, irritable stricture, inflamed prostate, etc. ; and after operations upon the perineum, anus, and the rectum ; a local anodyne effect can be produced by introducing into the rectum, in the form of a cone, cylinder, or pill, some quieting remedies. Messrs. Duncan and Flockhart of Edinburgh, prepare them after the following formula, which is much more effectual than the common soap and opium suppository, and is seldom or never expelled when introduced above the sphincter : Take of acetate of morphia, six grains : sugar of milk, one drachm ; simple cerate, half a drachm, or as much as may be sufficient to make a proper consistence, and divide the mass into twelve suppositories. It will be observed that each suppository contains a half grain of morphia. In cases of retention of urine from constriction of the neck of the bladder, a small quantity of the extract of belladonna may be added to the mass before it is divided and used. A good way to coat the suppositories is to insert a needle into the apex of each, and then dip it into melted wax and lard—one part of the former to two of the latter—and immediately afterwards into cold water to harden it before it loses its shape. These can be introduced within the rectum with the aid of the finger, or more neatly by the ordinary suppository tube. Mr. Coulson has used these suppositories lately in several lithotrity cases, and has found them of great service in allaying the irritation which often attends the passage of the fragments of calculi through the urethra. In cases of severe tenesmus in dysentery, anodyne suppositories will be found efficient in overcoming the difficulty. From the flattering accounts given of these agents it is probable that they will come into more general use.

THE ESSENTIAL CAUSE OF CHARLATANRY

"Does he still live who believes the hand of a living king or a dead culprit possesses miraculous curative powers?"—Travers.

Human life, though despised in theory by philosophers and enthusiasts, is yet so highly prized by all ranks and ages, that when assailed by incurable diseases the patient will fly from the candid physician to the lying quack or ignorant pretender; and to ensure a trial of any nostrum, however absurd, it is merely necessary to roundly assert, without a particle of evidence except the *ipse dixit* of the assertor, that it is infallible. But the greater misfortune is, that thousands of people are persuaded through their own fears and the representations of the unprincipled, that they are laboring under formidable diseases when their complaints are really harmless,—and thus they become the dupes, and too often the victims of mercenary charlatans.

EXPLANATION.

Messrs Editors: I desire through your Journal to address a few lines to such of my friends as may feel interested. I have learned that some of them are surprised to find in your Journal contributions from my pen, whilst my name stands on the title page of the "Eclectic Medical Journal," as a co-editor of it; and also in the circular of the "E. M. Institute," as an Emeritus professor. I admit that this state of the facts, with reference to my name, is sufficient to induce some to regard my position as being rather inconsistent; and yet it is easily explained.

I desire to have it known that in the present position of my name, I have had neither directly nor indirectly any other agency than this:—I have sent contributions to the College Journal, some of which have appeared. They bear my name and I hold myself responsible for all the consequences that may result from it; but for the appearance of my name in the Eclectic Medical Journal, and the Circular of the Institute as Emeritus professor, I acknowledge no responsibility, as I had no agency in the appearance of my name in those relations.

Wm. Byrd Powell, M. D.

WORCESTER MEDICAL INSTITUTION.

This well known Institution has usually held its annual course of lectures in the Spring, but the coming session will commence in the Autumn and extend into winter. If a Medical College does not hold but one session annually there can be no question but the winter is the best season for it.

It has now been thirteen years since the Worcester College commenced an existence under the auspices of the late Dr. Calvin Newton, who was an early advocate of a more innocent and sanative system of medication than that which prevailed in the land. The successors of the founder of the Institution have exhibited marked ability in elevating it to its present position.

MARRIED.

On March the 30th, in Covington Ky., D. H. Prunk, M. D., of Rockford Ill., to Miss Hattie A. daughter of Wm. J. Smith Esq., of the former place.

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ORIGINAL CONTRIBUTIONS.

THE SYMPATHETIC NERVOUS SYSTEM.

BY PROF. T. E. ST. JOHN.

PERHAPS no subject throughout the whole range of Physiology has been written upon more than this, and yet how little of importance has been added to our knowledge of the functions of this great portion of the nervous system. Vague hypotheses and wild conclusions have for the most part been the result of many investigations, and the great nerve of organic life remains to a considerable extent a mystery. How much of real value in regard to the functions of this nerve can be found in our works on Physiology? Comparatively nothing. Hundreds of pages are devoted to a discussion of the cerebro-spinal system but this, which is of such vast importance in the animal economy, governing all the secret springs of life, and controlling to a great extent the functions of digestion, absorption, circulation, etc., is passed over in a half dozen pages which leave us in as great a query as ever as to its use in the animal economy.

Carpenter disposes of it in a few pages, in which he describes the influence of the nervous system on organic functions, and concludes that it must be accomplished through the agency of the sympathetic nerve. Draper passes it by with hardly a flying notice as if it were not of enough importance to receive a place in his valuable work. Todd and Bowman are somwhat more elaborate. They give a good description of its anatomy and designate a portion of its functions, but fail to invest it with that degree of interest which its importance demands.

Under the designation of *Sympathetic Nerve* is comprised an extensive chain of ganglia and plexuses, which present such peculiarities of structure and arrangement as to give a striking contrast to the cerebro-spinal portion of the nervous system. This name, *Sympathetic*, is exceedingly vague and unmeaning. When a name is given to any organ or set of organs it should be such an one as shall, to a certain extent, distinguish it from every thing else in the body, and at the same time give the reader some idea either of its structure or its use. From the word *sympathetic* as applied to this nerve one would suppose that it was intimately concerned in the various sympathetic sensations and actions that are continually occurring in the body, but this is far from being the case, as the cerebro-spinal nerves are as much connected with these phenomena as the sympathetic, and the extent to which this or any other nerve can take part in these sympathies depends entirely upon the extent of their central and peripheral connections. It would be more consistent with a scientific nomenclature to discard the term *sympathetic* as applied to this nerve for the terms *ganglionic*, *intercostal*, or *organic*, either of which would in many regards be preferable. But when a name becomes thoroughly established so as to convey to the mind of the reader a general idea of what is meant, it is not always policy to change it even for one that would be more correct and scientific, as the discarding of old familiar names, and establishing new ones often occasion more immediate confusion in the mind of the reader than they add to the advancement of the science with which they are connected.

It is not my intention to give an anatomical description of the sympathetic nerve, for that is so well understood by every intelligent physician already, that it would be but an uninteresting rehearsal of what may be found in every work on anatomy. But in order to understand fully its varied functions, it will be necessary to describe briefly its structure, and anatomical connections with the cerebro-spinal nerves.

In considering the functions of this nerve it will be seen that there are three points or questions presented.

1. In regard to its connection with the cerebro-spinal system. Is it an independent portion of the nervous system, entirely unconnected in function with any other portion; or is it merely an off-shoot of the cerebro-spinal system, and dependent upon it for its powers of action?

2. As regards the endowment of the nerve fibres. Do they present the same characteristics as the cerebro-spinal, that is, are they motor and sensitive?

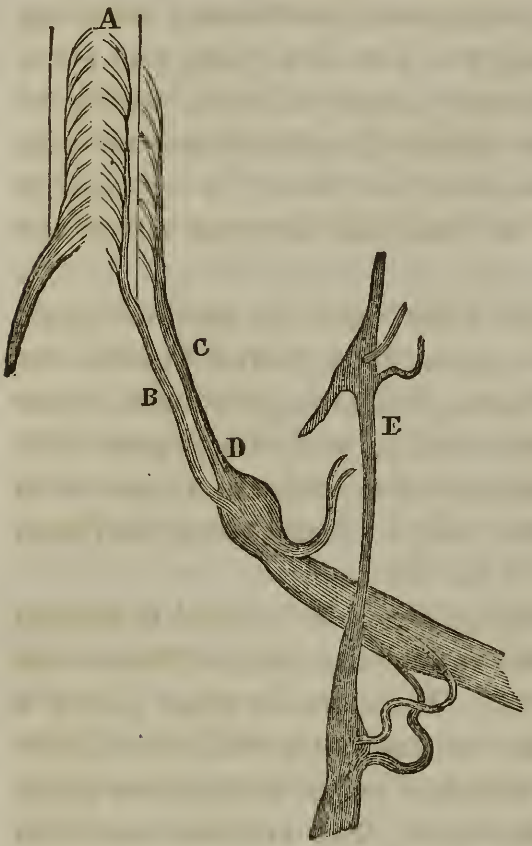
3. As regards the functions of this nerve. What are the actions which it incites in the animal economy?

In discussing these questions very much may be gained by considering closely the facts that their anatomical characteristics disclose. The question of the relation which these two systems bear to each other has been amply and ably discussed during the past few years, and not a few are the valuable facts that have been presented, from which we may readily draw our conclusions as regards the dependence or independence of this nerve. The statement which should be regarded as the correct one rests entirely upon the facts that the anatomy of the parts presents to us.

In composition this nerve does not differ from the cerebro-spinal, both being composed of a series of nerve fibres bound together by areolar tissue. The sheath or neurilemma of the sympathetic is denser than in the cerebro-spinal nerve, rendering the nerve fibres more difficult of separation. If a nerve be torn up by needles and treated with acetic acid a number of oval cell-nuclei may be seen among the fibres, with their long diameter parallel with the latter.

By an examination of the sympathetic nerve it is found to contain both kinds of nerve fibre, the gelatinous and tubular, and in different and varying quantities in different nerves. Thus, in the solar plexus a large quantity of the tubular fibres are seen ramifying, while the gelatinous constitute almost entirely the whole bulk of one of the fascicles which communicate with the cerebro-spinal nerves: they are also numerous in the sympathetic in the neck, while the tubular are comparatively few. Occasionally the tubular fibres are found upon the surface, and at other times quite in the centre, so that it is probable that the same fibre often changes its place, in one part of the nerve it would be deep seated, and at another point it would be found quite superficial, an arrangement that is well known to obtain among the fibres of all cerbro spinal nerves.

There are some physiologists of good repute who deny that the gelatinous fibres with which this nerve is so largely endowed are nervous, but consider them as constituting an early stage of fibrous or areolar tissue. That this is erroneous is evident from the following facts. Throughout the whole extent of the sympathetic nerve these two kinds exist in variable proportions, sometimes the one predominating, sometimes the other, and the nerve is often composed entirely of gelatinous fibres. If it were true as these observers would have us believe, that the gelatinous fibres were only a sheath to support the tubular, we should expect to find them always on the outside, but this is very far from being the case; they would also hold a due proportion to each other. Again, the olfactory filaments are composed of nucleated fibres resembling very closely the gelatinous fibres of the sympathetic, and there their nervous character is placed beyond a doubt.



The connection between the sympathetic and cerebro-spinal system takes place by means of filaments given off from each nerve. The cut represents the manner in which these connections are accomplished: *A* represents the anterior fissure of the spinal-cord, *B* the posterior and *C* the anterior root of a spinal nerve which unites at *D* giving off the anterior and posterior branch. It will be seen that the connection is made with the anterior spinal nerve which gives off a bundle of tubular fibres that passes to the sympathetic nerve *E*. Another filament which is gelatinous in composition leaves the sympathetic and may be traced back to the ganglion on the posterior root of the spinal nerve, where most of its fibres are lost; a few fibres pass into the anterior root, but they do not appear to continue unto the spinal cord, but are only connected with the *blood vessels* of that organ. This part of the bond of union between these two portions of the nervous system may be considered as a branch from the sympathetic that serves to unite its ganglion to the ganglion of the spinal nerve, and also to supply the blood-vessels of the cord.

The bundle of tubular fibres from the cerebro spinal nerves derives its filaments from both the anterior and posterior roots and passing *through* the vesicular matter of the sympathetic ganglion, accompanies the gelatinous fibres to the viscera in a manner already described.

Mr. Beck says that with the microscope he has been able to trace the white filament directly *through* the ganglion, and he advanced the opinion that they do not form any connection with the vesicles, other than that which might obtain from the passage of the filaments between them. Thus it will be seen that a very extensive connection, exists between these portions of the nervous system, an example of which might be cited in the fifth encephalic nerve, this being distributed largely to secreting surfaces we find that its connection with the sympathetic is even more extensive than any other; the nasal and lachrymal branches are connected with the ciliary ganlion, as well as several filaments from the carotid plexus; the superior maxillary branch also recieves two branches from the same ganglion and also several filaments from Meckels and the naso-palatine ganglia; the inferior maxillary branch receives numerous branches from the submaxillary and otic ganglia.

This extensive communication must indicate a mutual relation of the one to the other, and yet the fact that these fibres are found to mingle with each other without in the least losing their identity, or as stated by Mr. Beck, no organic connections being found between them, would seem to indicate that the proper sympathetic nerve or the gelatinous fibres were a system of nerves entirely independent in their functions of the cerebro-spinal system, and consist of nucleated fibres originating in the vesicular matter of the sympathetic ganglia.

When the compound nature of this nerve is taken into consideration it seems impossible to assert that it is entirely independent of the cerebro-spinal system, or that it is wholly dependent upon it. The mode of distribution of the sympathetic nerve indicates a kind of independence of, or dissimilarity to, the spinal nerves, which is worthy of notice; "It is evidently the nerve of the blood-vessels, and the branches follow and ramify upon their coats, clinging to and encircling them 'as the ivy entwines itself around the oak.' Wherever there is a secretory surface, or a gland, which is only a complex secretory surface, wherever the metamorphosis of blood is going on, or the elimination of a secretion is being performed, there we find distributed, in greater or less profusion, the *branches* of the ganglionic system; while in convenient collocation to every secretory apparatus, we find also one or more of the ganglionic centres of this system, apparently designed to superintend and direct, and to supply nervous force for the mysterious operaton."—(*Campbell.*)

It is stated by Mr. Davey that the ganglia of the sympathetic nerve are the parts of the nervous system first formed in the fœtus, and it is premised that this fact obtains through the whole animal kingdom. The monstrocity reported by Dr. Marshall Hall in which the brain and spinal cord were absent, indicates very clearly the independence of this nerve, all the functions over which it presides, as secretion, absorption etc., being duly and efficiently performed without the aid of the cerebro-spinal system. "The ganglionic nervous system is perfect at birth, and its functions are also perfect; this is completely organized, whilst the brain is nothing more than a mere pulpy mass, without any kind of functions or use to the individual in the possession of the same; the one is in active and increasing operation, the other is but a blank, doing nothing, useless; the ganglionic nervous system executes its functions instinctively, whereas the brain, if not the spinal cord, requires time and experience and direction ere it perform its functions, either for good or evil."—(*Davey*, *London Lancet*, *June* 1853.)

Another very decided proof of the dependence of the sympathetic nervous system is seen, says Davey, in the wards of any Lunatic Hospital in which are found many individuals who, by some disorder affecting the brain and spinal cord are reduced to a mere vegetative or organic existence. "Such patients lived oftentimes many years with their cerebro-spinal organism so disorganized as to be perfectly useless to them, unconscious, without feeling, emotion, or desire, void of thought, without hope, joy, or passion, lost to all moral sensation, or perhaps, without feeling of any kind, and incapable of only the most imperfect motive power, enfeebled, paralytic, they nevertheless digest, secrete, absorb, in a word, carry on, year by year, the strict vital functions, exactly as the mal-organized fœtus does; exactly as the frog or fish deprived of the brain and the spinal cord, did; and exactly as the polypus is in the habit of doing."

It will readily be seen that the sympathetic nerve proper is an independent nervous system, as able to perform its functions when disconnected from the cerebro-spinal centre, as when connected with it. But taken as a whole it cannot be regarded as thus independent, as it is from the cerebro-spinal system that it receives its tubular fibres upon which those parts to which they are distributed are dependent for their power of sensation and to a certain extent, of motion.

As regards the *second* proposition, it will readily be seen from cursory examination of the nerve that it must be endowed with both sensitive and motor filaments, as the white root which it receives from the cerebro-spinal centre, is made up of filaments from both the anterior and posterior roots of the spinal-nerve. That the sympathetic contains motor filaments is evident from the observations and experiments of Muller upon the cœliac ganglion. After having exposed this ganglion in the rabbit there was observed an increase in the peristaltic action of the intestines, occasioned by the exposure to the air, when this subsided he applied potassa fusa to the ganglion which was immediately followed by vigorous peristaltic action. It is also well known that an irritation of the cervical ganglia will excite an increased action of the heart. That these motor filaments are not under the direct influence of the will. may be proved by the fact that the muscles of the intestinal canal may be caused to contract by directing the will at the same time upon the abdominal muscles which are purely voluntary. An example of the *indirect* action of the will upon involuntary muscles may be seen in the iris, which no effort of the will if directed to it alone can have any influence upon whatever, but if at the same time the eye be caused to turn inward by the contraction of the internal rectus, the pupil instantly contracts, thus bringing the iris indirectly under the influence of the will. In regard to the sensibility of the sympathetic nerve, much obscurity prevails, as the observations of different investigators are contradictory and unsatisfactory; and indeed this is always the case when experiment is instituted to ascertain the function of nerves as regards sensibility, but the well known fact of the presence of pain in those parts supplied only by the sympathetic nerve is sufficient proof that it is endowed with sensitive filaments. How excessive is the pain accompanying colic or the passage of a renal or biliary calculus.

It is evident to all however that the sensitive filaments must be few, as during health there is apparently no sensibility in the parts supplied by this nerve, and it is only when the parts become highly irritated from any cause that this degree of sensibility is experienced. It is in fact only when an individual is sick that he has any cognizance of the fact that he is supplied with intestines.

There is a peculiarity in the *movements* of those parts supplied by the sympathetic nerve that is never observed in voluntary muscle, viz. the *rhythmical* character of their contractions, of which the peristaltic action of the intestines, and the contractions of the heart afford good examples. If the terminal branches of this nerve be examined closely, it will be seen that there are a large number of small ganglia not only among the different plexuses but situated upon the muscular tissue; especially is this the case in the heart, and it is probable that these small ganglia serve as magazines for the storing up of nervous power, which cause the contractions that are often seen in the heart for sometime after it has been removed from the body. In like manner it may often be observed that the peristaltic action of the intestines continue for a period of time after being disconnected with the main trunk of the sympathetic system. This may be partly due to the presence of the small ganglia, but in great part it is no doubt dependent upon the peculiar construction of the unstriped muscular fibre by which it is endowed with a slow and lasting, rather than with an energetic, rapid and fleeting action, and, again, the disposition or arrangement of the fibres is such that one cannot contract without exciting to a certain extent those immediately adjacent to it.

In regard to the source from which the fibres in the sympathetic system derive their power as motor or sensitive, is rendered so perfectly apparent by an examination of the anatomy of the parts that it is barely necessary to refer to it here. There can be no doubt but they are derived from the spinal cord and medulla oblongata. Valentine's experiments prove that the spinal nerves are intimately connected with the motion and sensation of all those parts supplied by the sympathetic. He found that an irritation of the roots of the first three or four cervical nerves caused an increased action of the heart; and by irritating the dorsal and lumbar nerves he was able to stimulate the peristaltic action of the intestines. These facts indicate the extensive communication between the sympathetic and spinal nerves, and also furnish a scientific foundation to the practice by which some physicians are enabled by a series of pressures upon the spinal column to ascertain the existence of disease in any of the thoracic or abdominal organs.

The *third* question has reference more particularly to the nerve proper, or the functions of the gelatinous fibres that have their origin in the vesicular matter of the ganglia, and are capable of acting and performing all their varied functions independent of the cerebro-spinal system.

From what has already been stated it will be seen that the blood-vessels are largely supplied with the filaments of this nerve, which form a plexus around the vessel. They regulate the tension of the arterial wall and control to a certain extent the amount of blood that flows through the vessel. By attributing the controlling power of the circulation to this nerve it is very easy to account for many of the phenomena that are presented in the circulation which cannot be explained satisfactorily in any other manner, as that of blushing, the palor of fright, etc. Every one has experienced in his own person the peculiar sensation which is referable to the epigastric region, or immediately in the vicinity of the solar plexus, the great central ganglion of the sympathetic system, that is occasioned by a sudden fright, or the rehearsal of some unexpected bad news as the loss of relatives, or the failure of some favorite speculation, or something of that character. This is undoubtedly produced by the excitement being transmitted to the sympathetic nerve, the most powerful effect is naturally felt at that point at which are found the largest proportion of sympathetic filaments. This irritation or excitement affecting as it does the whole sympathetic system produces a peculiar constringent effect upon the capillaries of the external surface which forces the blood from them, leaving the surface devoid for a time of the circulating fluid, and hence the blanched and pale appearance which accompanies sudden frights and other impressions of like character.

Again in the phenomena of blushing, the effect produced upon the sympathetic nerve is of an opposite character and induces a relaxation of the capillaries, thereby allowing a rush of blood into them, and as this nerve is as intimately connected with the process of secretion as that of circulation, it is almost universally the case that the secretions are poured out rapidly, the perspiration is profuse, and often the action of the kidneys is so great that the sufferer is obliged to void urine almost immediately afterwards. These are facts that are familiar to every one and it is evident that they could be referred to nothing else than the influence of the sympathetic nerve, as many of these parts are supplied by nerves from no other source.

The experiments of Pourfour de Petit which were made as early as 1732 prove the influence of this nerve upon the circulation. He found that a division of the sympathetic opposite the third or fourth cervical vertebra was rapidly followed by a great disturbance in the circulation of the eye-ball; the conjunctiva appeared swollen and inflamed, with flattening of the cornea, contraction of the pupil, retraction of the eye-ball, and a copious flow of tears. Dupuy observed similar effects resulting from the extirpation of the superior cervical ganglion in the horse, and when both were removed it was followed by an "anasarcous state of the limbs, great emaciation, and an eruption over the whole surface of the body." The results of these experiments were afterwards confirmed by Dr. J. Reid. He also states that in one case the redness of the conjunctiva took place in a *few minutes* after the removal of the ganglion.

Indeed this seems to be the only nerve, or system of nerves that has any influence on the great functions of animal life, circulation, absorption and secretion. From the experiment and observation of Dr. Davy already quoted, it would appear that the sympathetic nerve was the most important portion of the nervous system. The experiments of Sir. B. Brodie, to ascertain the influence of the cerebro-spinal nerves in the reparation of injuries, prove decidedly that they have no influence whatever, as in the frogs, guinea pigs and dogs which were the animals operated upon, and in which there was an entire destruction of the lumbar spinal cord and of the sciatic and crural nerves, the reparative process was neither retarded nor in the least interfered with, but wounds and fractures healed as readily and perfectly as when under the influence of the cerebro-spinal system. In these instances says Davy, " the ganglionic nervous power was necessarily left intact, and this it was which caused the wounds to heal and fractures to unite."

The cerebro-spinal system is capable of sustaining a large amount of impairment without material injury to the individual, yet it is well known to every school boy, how a slight blow over the solar plexus, at the " pit of the stomach" will cause excessive pain, with great loss of strength. The great danger attending a blow upon this part was known and acknowledged by prize fighters, in forbidding the combatants to strike below the sternum.

All these facts would indicate that the sympathetic nerve instead of being but an appendage of the nervous system, is really the most important part of that system so far as regards the maintainance of animal life.

It must be perfectly evident to the mind of all thinking men that if these actions are capable of being produced by any irritation of the sympathetic ganglia or nerves, they may in like manner, owing to the intimate and direct communication between this and the cerebro-spinal system of nerves, be caused by an irritation first made upon a cerebro-spinal nerve and then reflected or conveyed to the sympathetic nerve, in the same manner as muscles are caused to contract by a stimulation applied to a distant part of the body. This being the case (as it may very easily be proven to be correct,) we have the beautiful system first described and presented to the profession by Dr. H. F. Campbell, of Georgia, and called by him the *excito-secretory* system of nerves.

I do not intend to give a minute description of this peculiar action of the sympathetic nerve, but as I have already alluded to the connection between this and the fifth nerve, it will be of interest to notice some of the phenomena that assist in establishing the presence of this function in the animal economy. The fifth nerve supplies the teeth and as a natural consequence any irritation in that vicinity, as that attendant upon dentition, for instance, would be sufficient to develope all the conditions necessary for an excitation of the sympathetic nerve with which it is so intimately connected. What are the phenomena that present themselves as dependent upon the process of dentition? Are they not all, or nearly all connected with alterations in the process of nutrition and secretion? The secretions of the alimentary canal are increased or so changed as to produce "diarrhœa" or "cholera infantum;" the pituitary membrane often becomes congested and throws off an abundant secretion; and often we observe covering the entire surface of the body a *peculiar eruption* which has received the popular name of "tooth rash." I have now under my care a little boy eighteen months old who is affected with this peculiar rash. When about nine months old his front or incisor teeth appeared, and during the time they were irritating the gums, his entire body and more particularly his head and face were covered with a rash, which, commencing in a water-blister, would in a few days present a small pustule filled with a yellowish matter. If this matter was pressed out when it first made its appearance the vesicle would soon dry up, but if left to itself it would remain for several days. When the teeth were erupted, the rash disappeared. At the present time he is cutting his first molars, and the rash is out the same as before.

Says Campbell, "Now, for these concomitants of dentition, there had never been presented any rational and satisfactory explanation, until they were referred to, as illustrating the doctrine of excito-secretory action in 1850. A comprehension of this doctrine affords to them a ready interpretation by referring them to the modified action of the secretory system controlling the capillary circulation of the cutaneous surface, which modification is excited through the dental filaments of the fifth pair, the spinal marrow, and that portion of the ganglionic system above referred to."

The phenomena accompanying the process of dentition are by no means the only ones that can be cited as the results of the excito-secretory action. It has often been observed that there exists a close connection between the functions of the skin and the internal secretory apparatus. Thus, any sudden exposure of the body to a stream of cold water or air is sufficient to cause an increase in the flow of urine. Dr. Marshall Hall remarks: "A partial keen current of air, falling on *any* susceptible portion of the skin, may induce inflammation in any susceptible internal organ. *An extensive burn or scald is apt to induce pneumonia.*"

Many other facts might be noticed as corroborative of this function, but these are sufficient to establish the existence of the excito-secretory action of this nerve. With what importance do these facts invest this sympathetic nerve, which has so long been regarded as one of the mysteries of physiology. What a strange interest attaches itself to this chain of ganglia and plexuses, which govern and control all the vital functions of animal life. How beautiful the arrangement of those nervous filaments which may in one instance excite to action a motor nerve causing violent muscular contractions while under other circumstances will exert its influence upon the nerve of organic life, causing an alteration, excitation or dimunition of the functions which are so closely connected with the continuation of life as circulation, absorption and secretion.

Dr. Shetterly in a monograph published in the Peninsular Independent upon the forces that keep up the circulation, mentions the sympathetic ganglia and nerve as contributing largely to the maintainance of this action. He regards the ganglia as so many magazines for the storing up of electricity which is conveyed to them by the nerve filaments, these receiving the electricity directly from the blood. But before this can be regarded as true it must be proven that electricity and nervous force are identical, an hypothesis which needs the result of many experiments and much observation to substantiate the truth of it.

It is not at all improbable that this nerve is very *largely* concerned in the maintainance of the circulation, but to assert that the ganglia are the receptacles of electricity or that are the nerves the conductors of that electricity, is an assumption that is wholly unsupported by facts.

Dr. Tully speaks of it under the name of *the nerve of chemical action*, *nutrition and reproduction*, and when we take into consideration the various actions of this nerve the name seems not inappropriate.

But without tracing farther the phenomena of the sympathetic nervous system its functions may be summed up, as follows.

1. It is not entirely independent of the cerebro-spinal system, as from this source it receives its sensitive and motor filaments; neither is it dependent solely upon the spinal nerves, as the gelatinous fibers may exercise their functions even when the cerebro-spinal system is entirely destroyed.

2. It contains both motor and sensitive filaments for the parts to which it is supplied.

3. It presides especially over the circulation, by being distributed largely to the arterial walls, thus regulating the tonicity of the vessels, and controlling the amount of blood that flows through them.

4. It regulates the functions of absorption and secretion, and in connection with the sensitive filaments of the cerebro-spinal system forms the *excito-secretory* system, by means of which are excited to increased action the various secretions of the body, by the influence of a stimulus or irritation applied to the external surface.

NOTES.

BY J. A. HENNING, M. D.

Recently some four cases of *Otitis* have come under my care for treatment. All the patients were adults, and three of the cases were tolerably fair specimens of the sanguine bilious-lymphatic temperaments; the fourth of the sanguine encephalic temperament. The most prominent symptoms manifested were excruciating pain in the ear, intolerable humming, with a slight discharge of mucus from the meatus externus. In one case where it had been in progress some three days before treatment, mucus was discharged through the Eustachian tube.

In the first case I adopted the usual treatment given by various authors, but without any relief to the patient whatever. Nearly as a last resort I determined to use Chloroform in the following way. Ten drops of chloroform were put in the meatus and a small ball of cotton was applied to prevent a too rapid evaporation. This would subdue the pain but would create a slight burning sensation. In one hour afterwards the ear was syringed with an infusion of slippery elm, and then secured from the atmosphere by cotton. From twelve to twenty-four hours this treatment was repeated, which arrested the disease entirely without any more treatment in all the above cases. In the meantime if constitutional symptoms presented themselves, they were met with appropriate remedies.

In the last year, I treated many cases of lobular *Pneumonia* in children under the age of six months. Some few were under the age of two months. In a few cases there was hepatization of the lung. All the cases that came under my care were promptly relieved in two or three days by the following treatment.

℞. Ipecacuanha, grs. ij.
Lobelia seed " ij.
Liquorice " vj. M.

Divide into eight papers, and give one every three hours.

If there was much febrile excitement, with marked periodicity I prescribed the following:

℞. Sul. Quinia, grs. jv.
Hydrastine, " ij.
Cornine, " iij. M.

Divide into eight papers, take one between each of the former. Intermittingly a fomentation of hops and tansy steeped in vinegar was applied over the entire chest, as warm as the patient could bear. The bowels and urinary organs frequently became obstructed in these cases which should arrest the immediate attention of the practitioner, and a healthy depuration should be established in the organs.

During the last few years, some twenty-five or thirty cases of *parturition* required something more than ordinary means to expedite delivery. I have used secale cornutum, caulophyllum thalictroides, cimicifuga racemosa, and caulophyllin; and so far as my experience extended, a strong infusion of equal parts of caulophyllum and cimicifuga will arouse uterine contraction as efficiently and with as much promptness as ergot will, and the contractions resemble more the natural ones, instead of the continuous, spasmodic contractions effected by ergot.

This infusion is also attended with more safety to both mother and child, and where it will fail in producing uterine contraction, ergot will fail. Caulophyllin does not do so well in my hands as the crude article, though I confess I have not administered it sufficiently to give a decided opinion relative to its action on the uterus.

HEREDITARY TRANSMISSION OF CRANIAL AND OTHER PHYSICAL DEFORMITIES AND PECULIARITIES.

BY L. C. DOLLEY, M. D.

Prof. W. Byrd Powell has presented through a late number of the College Journal, facts which demonstrate the occasional transmission of cranial deformities produced by art. Prof. Powell observes that ethnological physiologists, so far as he is informed, do not agree with him in the belief of the transmissibility of these deformities. The Professor is not, however, alone in his views, neither are the facts adduced by him the only corroborating evidence on record.

M. Gosse in a recently published work, "Essai sur les Deformitationss artificielles du Crane," (Geneva, 1855,) shows that the forms artificially impressed on the skull during successive generations, tend to become hereditary, and that, consequently, we must assign less value than has been hitherto assigned to those characteristics of distinct races which the forms of the skull have supplied. (West. Rev.) Not only are the learned and talented authors of the "Types of Mankind" in opposition to the views entertained by Prof. Powell, and M. Gosse, and to certain stubborn facts relating to transmission of cranial deformities, but they have also set forth other views upon topics of great magnitude with an assurance seldom found among the wisest and most humble students of nature, whilst the greatest naturalists in the world, Linnæus, Blumenbach, the two Humbolts, Cuvier, Bunson, Owen, Pritchard, Lepsius and many other careful investigators, deep drinkers at the "Pierian Spring" have been forced to conclusions directly the reverse.

Why should one doubt that cranial peculiarities, accidentally or artificially produced, may be transmitted, inasmuch as we see numerous examples of the transmission of other physical and artificially produced peculiarities, in man and the lower animals? All parts of the animal body are alike subject to the laws of growth and impression during utero-gestation. If accidental or artificial peculiarities of limbs, the skin, etc., are occasionally transmitted, why may not those of the head? Blumenbach relates the case of a man whose little finger was crushed and twisted, by an accident to his right hand, and his sons inherited right hands with little fingers distorted. A writer in the Western Review, affirms that horses marked during successive generations, with a red hot iron, in the same place, transmit the visible traces of such marks to their colts. A dog had her hinder parts paralyzed for several days by a blow; six of her seven pups were deformed or excessively weak in their hinder parts, and were drowned as useless. Burdach cites the case of a woman who nearly died from hemorrhage after blood-letting; her daughter was so sensitive that a violent hemorrhage would follow even a trifling scratch. She in turn transmitted this peculiarity to her son. A man had the habit of sleeping on his back with his right leg crossed over the left; one of his daughters showed the same peculiarity from her birth, constantly assuming it in her cradle, in spite of swathing. A superb stallion, son of Le Glorieux, who came from the Pompadeur stables, became blind from disease; all his colts became blind before they were three years old. Manpertius mentions a phenomenon which has been observed elsewhere by others; he assures us, "that there were two families in Germany, who have been distinguished for several generations by six fingers on each hand, and the same number of toes on each foot," (Dr. Pritchard). George Combe relates the following: "A man's first child was of sound mind; afterwards he had a fall from his horse, by which his head was much injured. His next two children proved to be both idiots. After this he was trepanned, and had other children, and they turned out to be of sound mind. Venette knew a woman who limped with the right leg; her daughter was born with the same defect in her right leg. In the civilized countries the constant habit of milking cows has enlarged the udder greatly beyond its natural size, and so changed the secretions that the supply does not cease when the calf is removed. In Columbia, where circumstances are entirely different, nature shows a strong tendency to assume its original type; a cow gives milk there only while the calf is with her. M. Danney made experiments during ten years with rabbits, a hundred couples being selected by him with a view to the creation of peculiarities. By always choosing the parents, " d'apres des circoustances individuelles fixes et toujours les memes dous certaines lignees," he succeeded in obtaining a number of mal-formations according to his preconceived plan. And such experiments have been repeated on dogs, pigeons and poultry with like success." (West. Rev.)

From these facts and others which may be mentioned, it seems safe to say, that each new individual inherits a predisposition to the habits and structure, accidental and otherwise, of those from whom it is derived. When all the paternal influences concerned in moulding the constitution *in utero* are appreciated, we see the appropriateness of the saying of S. T. Colderidge,—" that the history of a man for the nine months preceding his birth would probably be far more interesting, and contain events of greater moment than all that follows it."

Facts relating to the transmissibility of not only cranial deformities, but of all other physical aberrations and peculiarities, are important in helping to settle the controversy on the unity of the human races. Without this tradition, made known by Prof. Powell, respecting the custom of the Shockshumas deforming the heads of their children, how naturally Messrs. Geo. R. Gliddon, Nott, and Agassiz, might have concluded that this deformity was a " primordial organic form," and that hence the Choctaw nation constitutes one of the supposed plurality of the human species, or an argument that "man was created in nations," in different quarters of the globe. (As to the number of these original nations or primordial organic forms, no two advocates of the plurality theory are found to agree, but vary from two to one hundred.) If by means of tradition or other more correct sources of light, we could penetrate far back into the " night of time," even beyond the monumental records of Egypt and Assyria, we might find that other peculiarities of form, color, hair, etc., may not have been perpetuated through the whole period of human existence. But no hereditary peculiarities of an accidental or artificial character can constitute a different species. For wise purposes the transmission of deformities is not general but exceptional, and never extends to changes in what naturalists term the essential character of animals, or to those peculiarities which divide them into species. Creation is a system of antagonism—there are opposing forces in both the spiritual and physical world. Excesses are counteracted or neutralized by opposites or deficiences, and thus nature retains her wonted limits in the animal kingdom, as the planets are kept in their accustomed paths by both centrifugal and centripetal forces. Some of these accidental deviations, under favorable influences may be very tenacious and constitute the more permanent varieties seen among mankind, and within the limits of particular species among the lower animals; while others under different influences are more transient, and all serve to prove the truth of the startling declaration—"I will visit the sins of the fathers on the children, unto the third and fourth generation."

These differences seen among mankind, even the widest of them, (which have been brought forward to show that the revelations of the scriptures are false, "its hypothesis about human creation crude and puerile," and that God hath not "made of one blood all nations of men for to dwell on the face of the earth,") are not greater than those observed to exist in the same species of domestic quadrupeds and poultry. Naturalists are all agreed that the striking varieties of the domestic hog, black, brown, grey and white, flat heads and small, are all descendents of the formidable wild boar (Sus scrophus) of the Eastern continent. All of the varieties of domestic cats have come from the wild cat found west of the Nile. The varieties of the horse, cow, sheep, dog, goat, turkey and hen are each found to present a greater contrast in color, in texture of covering, in form of body, jaws, and even crania than exist in the different races of men, even including the deformities of the Choctaws, the Shoshnees, the Clatsaps, the ancient Peruvian and Natchez Indians, the Conalitaks and the Flat Heads. If to originate the first variety of dogs and barn-yard fowls, it did not become necessary to create them "in nations," why need we suppose that the varieties of the genus homo could only come from a "primordial organic form?"

It may be noticed in this connection, that accidental and acquired mental habits and peculiarities, as well as physical, are susceptible of transmission. Mr. Knight who investigated the subject for a series of years, tells us, "that a terrier, whose parents have been in the habit of fighting with polecats, will instantly show every mark of anger, when he first perceives merely the scent of that animal. A young spaniel brought up with this terrier, showed no such emotion, but it pursued a woodcock the first time it ever saw one. The offspring of the shepherd's dog in active service, instinctively follows the flock, while, if his father or grandfather have been taken away from this occupation, he will have lost the art, and be difficult to teach." (The Body and the Mind, by Geo. Moore, M.D.) "It is worthy of notice, that the amble, the pace to which the domestic horse in Spanish America is exclusively trained, becomes in the course of some generations hereditary, and is assumed by the young ones without teaching." (Encyclopædia Brit.) F. Cuvier observes that "young foxes in those parts of the country where traps are set, manifest much more prudence than even the old foxes, in districts where they are less persecuted." Birds on newly inhabited islands soon learn to dread man, and this dread they transmit. A recent writer on hereditary influence, says: "We had a puppy, taken from its mother at six weeks old, who although never taught to beg, (an accomplishment his mother had been taught), spontaneously took to begging for everything he wanted, when about seven or eight months old; he would beg for food, beg to be let out of the room, and one day was found opposite a rabbit hutch, begging for the rabbits."

Look wherever we will among human beings, animals, and even plants, and we cannot fail to observe these highly interesting operations of the laws of hereditary transmission. Its scope through physical and psychical peculiarities, is very extensive; and we see no good reason why it may not include cranial deformities, as well as any others. "It is not simply," says Mr. Spencer, "that a modified form of constitution, produced by new habits of life, is bequeathed to future generations; but it is that the modified nervous tendencies produced by such new habits of life are also bequeathed; and if the new habits of life become permanent, the tendencies become permanent." By these laws we are able to solve the mystery of what is called the "permanency of races," and all the intricacies of National character. But it should be remembered, that in all the diversity and dissimilitude allowed by nature, all organic creation is limited by specific peculiarities and attributes. All mankind possess resemblances in bony structure, dentition, period of utero-gestation, longevity, average number of progeny, fertility of intermixture, power of conscience, sentiment of worship, in fact, all the primary and specific resemblances, which group with unerring precision all of the species among the lower animals, from the Mastodon to the Mollusk.

ECLAMPSIA OF ADULTS.

BY LEWIS E. MILLER, M. D.

Most authors describe Eclampsia as existing in two species, but I am disposed to present three varieties or species, viz.: 1. eclampsia of infants; 2. eclampsia accompanying parturition; 3. eclampsia of adults unaccompanied by the parturient period. When non-pregnant women, and women not in labor are attacked with convulsions, they are usually ascribed to hysteria or epilepsy, as the cause, but we often see in adults eclampsia occurring as a symptom of other diseases.

It is characterized by unusual restlessness, extreme agitation and haste in motion, which usually precede the attacks. These premonitory symptoms may be entirely absent, and the disease be ushered in rapidly. The patient feels a sensation of an approaching syncope, his senses disappear, and he falls down in convulsions. They may be distinguished from those of epilepsy by the less severity of the former; and another distinguishing mark of eclampsia is in the manner in which the thumbs are held, they being never drawn into the palm of the hand, as in epilepsy. Consciousness disappears to a greater or less extent, but feeling is not always entirely destroyed, and many patients will retain some faint recollection of the attack.

After its termination the patient feels weary, sleepy, and very much depressed mentally. Occasionally hyperemia of the brain and membranes preceded eclampsia for some length of time. Fuch asserts that in this disease there often exist symptoms of spinal irritation.

Eclampsia is often caused by circumstances which accompany convalescence from other diseases ; it may also be induced by the practice of onanism. The occasional causes are mostly those acting from within, or having a central origin, such as violent passions, idiosyncrasies, excessive hemorrhages, etc. It is often found associated with other diseases, especially those of the reproductive organs of the female sex.

Some forms of neuralgia have been known to terminate in cramp. In eclampsia, death usually ensues through a paralysis of the brain, or inanition.

In the treatment of this disease, the attention must first be directed to a removal of the cause. During the attack the same treatment is required as in eclampsia of infants. If it be induced by excessive hemorrhage, it will be well to lay the patient with the head lower than the body. The temples must be washed with spiritous liquids. Narcotics are of no service whatever, and should never be used; but musk, assafœtida, castor, valerian, sulphuric and acetic ether, and the preparations of ammonia will be found to be of much advantage.

On the sixth of December, 1857, a well-educated respectable lady, affected with eclampsia, called at my office for examination and treatment. I refused at first to have anything to do with the case, but through the entreaties of her friends, I consented to treat her, but without any promise of cure. She was 27 years of age, unmarried, of a general healthy appearance, and sanguine temperament. Menstruation regular during the last two years, but often painful. No spinal irritation present. She complained of heart-burn, pain in region of the liver, and of sick-headache on the day preceding the attack. She has been afflicted for about nine years. During the first four years she was only affected by slight convulsions, but for the latter five years, the convulsions have been increasing in severity and frequency.

At first I thought she was laboring under hysterical epilepsy, but a more careful examination convinced me that I was mistaken about the real nature of the case. My treatment was as follows: Gave her the Antidyspeptic Pill, (Am. Ec. Disp.) every second night. She also took an infusion of calamus combined with

℞. Aromatic sulph. acid,
Syr. orange peel,
Mixt. of calc. magnesia, āā f℥ iij.
Distilled water, f℥ viij. M.

I occasionally administered Dover's powders, or ether combined with oil of valerian.

℞. Acetic ether, f℥iij.
Oil of valerian, gtts. xxx. M.

As a sedative as circumstances seemed to require. She also took a pill of:

℞. Assafœtida,
Rhubarb, āā ʒj. M. form three grain pills.

As a cathartic I used pills composed of podophyllin, leptandrin and rhubarb. She also used during the attack pills of:

℞. Camphor.
Musk,
Cimicifugine, āā grs. x. M. f. p. No. x.

She was much addicted to the use of tobacco, which *luxury* I forbade entirely. When I first saw her she had three convulsions in thirty-six hours. She is now nearly well, having only occasionally a return of the convulsion, and then very light. She commenced the use of tobacco again some two months since, but was obliged to give it up, as it brought back the convulsions, which however were very light.

NOTES ON MILK SICKNESS.

BY WM. M'MULLEN, M. D.

The name which this disease bears indicates the source from which it is usually derived, it being generally supposed that it depends upon a poison contained in the flesh and milk of animals, particularly the cow. In regard to the proximate cause we have many speculations, but few facts. It is caused in man by the use of the flesh milk and cheese of the animals affected. It is probable that the poison is of an *acid* character, as there is no kind of medicine so universally successful in its treatment, as *alkalies*. It comes on with lassitude, weariness, and a sense of great exhaustion and trembling from slight exertion.

The tongue is coated white, breath very offensive, obstinate constipation accompanies or immediately succeeds these symptoms, which is followed by nausea, and vomiting of a white frothy mucus mixed with bile. The patient experiences much distress from a throbbing and burning sensation in the stomach and bowels.

The treatment I have found most successful is the following:

℞. Sulph. magnesia, ℥ ij.
Hydrastis canadensis, ʒij.
Aquæ puræ, f℥ iv. M.

Dose, two tablepoonsfuls every two hours, until the bowels are moved freely. I then use the Syr. Rhei et Potass. in suitable doses, to keep the bowels regular. To relieve the throbbing in the stomach, I use:

℞. Chlorid. Sodii, ℥ ij.
Tinct. camphoræ, f℥ iij.
Aquæ puræ, f℥ viij. M.

Apply to the stomach every half hour on a flannel cloth until the throbbing ceases. I have used this in a great number of cases of this disease, and in no instance has it failed.

ANALYSIS OF THE WATER OF NEW LEBANON SPRINGS, NEW YORK.

BY PROF. H. DUSSAUCE.

The water of these springs is transparent; its density is 1.003. When a portion is placed in a glass it is observed for several minutes to liberate innumerable small bubbles of nitrogen gas. At first it has but little odor, which gradually increases till it is possessed of the characteristic odor of sulphuretted hydrogen; this result is facilitated by the addition of a few drops of sulphuric acid. Its taste is sulphurous and alkaline. If a glass containing this water is covered for twenty-four hours with paper previously saturated with acetate of lead, the latter will assume a light brown color, or if acetate of lead be added to the water, a light brown precipitate is obtained; when used for washing, it has the characteristic unctious feeling of the alkaline waters. It contains some organic matter, which is yellowish-red in color. Its temperature is 78° Fh., which is doubtless somewhat below its actual temperature previous to its arrival at the surface, since there is adjoining it a cold spring the water of which must mix with and depress its temperature.

The chemical character of this water is similar to that of the sulphurous springs of the Pyrennees, containing alkaline sulphides, carbonates, silicates, etc. With reagents it yields the following reactions:

With Syrup of Violets, -	A green precipitate.
" Nitrate of Silver, - - -	A brown "
" Acetate of Lead, - - -	A brown "
" Oxalate of Ammonia, - -	A light "
" Chloride of Barium, - -	Becomes turbid.
" Sulphuric Acid, - - -	Developes the odor.
" Sulphate of Zinc, - -	Destroys sulphurous odor.

Quantitative Analysis.—The chemical matter of this water may be separated into three classes, viz: 1. Gases in solution; 2. Compounds liable to change on exposure to the air; 3. Fixed matter.

The solid residue after the evaporation of the water, contains, in addition to the fixed matters, a portion of the alterable compounds transformed into others of a more stable character.

1. *Gases*—These are principally oxygen and nitrogen, which are contained in considerable quantities in solution. This is easily determined by placing over a quantity of the water, a suitable vessel for collecting the gases. To the presence of free oxygen doubtless is due the

transformation of a portion of the sulphur into sulphuric acid ; there is also present free carbonic acid, and a small quantity of Hydrosulphuric acid.

2. *Compounds Liable to Change on Exposure to the Air.*—The more important are an alkaline sulphide, in part transformed to a sulphate and carbonate, and a silicate, which is likewise transformed into a carbonate, with the separation of silicic acid. There is also present a portion of alkaline carbonate which is not the result of a decomposition of the sulphide and silicate. When treated with nitrate of silver in the presence of an excess of ammonia, the sulphur is precipitated in combination with the silver as a sulphide of that metal, which upon separation and weighing, indicates the quantity of sulphide of sodium present, which is 0.005 grains in a quart, or 0.02 grains in a gallon of the spring water.

3. *Fixed Matter.*—If the evaporation of the water is slowly accomplished, near its termination the liquid assumes a yellow color, and silicic acid is separated; at which time the solution is alkaline in reaction. The evaporation should be continued to dryness, when the residuum is to be calcined to decompose any organic matter which may be present. From the residuary matter, I procured silicic, sulphuric, carbonic and hydrochloric acids, and the following bases: potassa, soda, lime, magnesia, alumina, and peroxide of iron. The contents of one gallon of this water may be thus classified:

Temperature, 78° F.

Gases :	
Oxygen, - - - - - -	2.00 Cubic Inches.
Nitrogen, - - - - - -	3.50 " "
Carbonic acid, - - - - -	0.50 " "
Hydro-sulphuric acid, - - -	A trace.
	6.00 Cubic Inches.
Fixed Matter :	
Sulphide of Sodium, - - - - -	0.02 Grains.
Carbonate of Soda, - - - - -	2.41 "
Sulphate of Potassa, - - - - -	1.04 "
Chloride of Sodium, - - - -	0.96 "
Carbonate of Lime, - - - - -	4.05 "
Sulphate of Magnesia, - - - -	1.06 "
Alumina, - - - - - - -	0.45 "
Sesqui-oxide of Iron, - - - -	0.94 "
Silicic acid, - - - - - -	3.25 "
Organic matter, - - - - -	1.22 "
	15.40 "

I have since analyzed the incrustation upon the interior of a lead pipe through which this water has passed for four years. The deposit is about one inch in thickness in layers, so that the deposition of each year can readily be distinguished; the chemical constituents of this incrustation are carbonate of lime and silicic acid.

In conclusion, I am of the opinion, that this water would exhibit more prominently its sulphurous character if the cold spring which now mixes with it could be diverted from its course, so as to avoid the depression of temperature and introduction of oxygen gas, which transforms some of its constituents. All my efforts to discover iodine in this water have been without result.

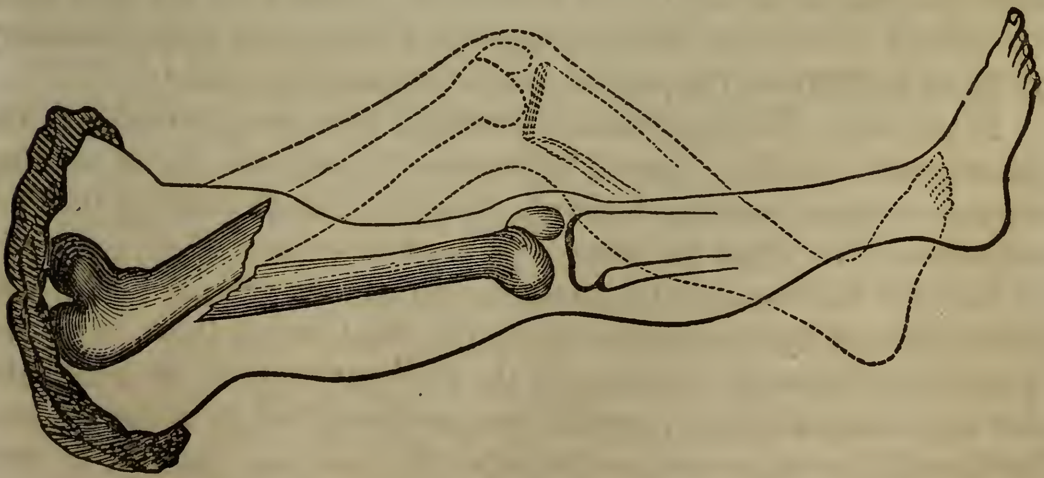
ON FRACTURE OF THE FEMUR JUST BELOW THE TROCHANTERS.

BY PROF. A. J. HOWE.

Of the fractured injuries that are likely to result in deformity from want of skill in treatment, none are more important than the one I am about to describe. In treating fractures of the upper limbs it is exceedingly desirable to preserve the functions unimpaired, yet it is equally desirable in managing fractures of the lower extremities so that no deformity, as shortening and angularity, be admitted. The agencies that produce displacement and deformities after a fracture are muscular contraction, which constantly tends to draw the points of attachment nearer each other, and the weight of the limb, which is manifested by the tendency of the feet and legs to eversion from mere gravity. An example of which may be observed in the outward inclination of the limbs of a dead subject. Hence, in the treatment of fractures, these influences are to be particularly guarded against.

The first surgeon known to have taken a rational view of the causes of deformity in fractured injuries was Percival Pott, who as early as 1768, produced a complete treatise on Fractures and Dislocations, his attention several years previously having been turned to the subject by an accident to himself, by which his leg was broken. He found, while being conveyed home on a door, from Southwark, the scene of his misfortune, over London Bridge to Watting, a distance of three miles, that great comfort was derived from having his leg flexed. The idea was deeply impressed upon his mind that the contraction of the muscles had much to do, not only with his present distress, but in preventing a proper adjustment and continued coaptation of the broken bones. He concluded that one of the great objects of the surgeon when called to treat a broken bone is to relieve the muscular contraction, by taking advantage of position; and his observations and well drawn conclusions have established a principle in surgery. His own case too, had much to do towards abolishing the destructive practice of amputating in every case of *compound* fracture. The surgeons in consultation, decided that amputation should be performed. Dr. Pott believing that no one could be a proper judge in his own case, submitted to their decision, and the instruments were actually prepared, when his old preceptor, Mr. Nourse, who had been detained later than the other surgeons, fortunately arrived. Influenced, perhaps by a sense of the great loss that amputation would inflict upon one for whom he entertained so high a regard, after carefully examining the injury, he said "he thought there was a possibility of preserving it," and an attempt to save it was acquiesced in by those who had previously decided to amputate. The result was favorable to Dr. Pott and the world, for that circumstance gave *conservative* surgery a great impulse.

Besides the ordinary contraction of the muscles, they are excited to undue action by the serrated edges of the broken bones, a condition that increases the displacement and all its attendant evils. The precise effect of the muscles of the leg upon the fragments of the femur broken at a point corresponding with the junction of the upper with the middle third of the bone, needs some study to be well understood.



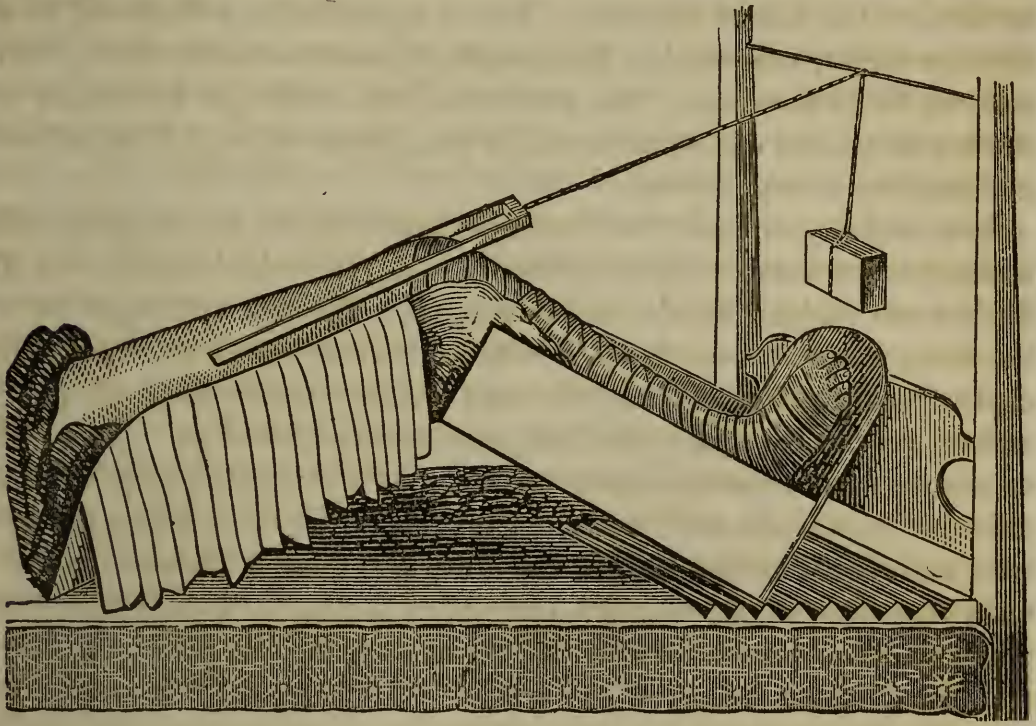
This original diagram represents the position the fragments of bone take after a fracture of the femur below the trochanters; also a faint outline of the limb in a flexed state, to show how the lower fragment may be accommodated to the upper one, which is in a comparatively fixed condition.

When the thigh is amputated high up, the flexors often act so powerfully, as to place the stump, for a time, nearly at right angles with the pelvis, hence it must be evident, that when there is a solution of continuity in the bone, the muscles which tend most to displace the upper fragment, are the iliacus internus and psoas magnus; and the effect of their contraction is more or less powerful in raising the upper part, in proportion to the distance of the fracture from the point of their insertion, or the length of the lever by which they are resisted. At the same time that the muscles just named drag the upper fragment upward and inward, the combined action of other muscles arising from the pelvis and inserted into the linea aspera and tibia, displaces the lower fragment backwards, when the want of apposition of the two ends of the bone allows of shortening, the upper fragment riding the lower. The angular deformity and the shortening will be present whether the fracture be transverse or oblique. In old persons it is commonly oblique, in young persons it is more frequently transverse. As was suggested by me in a former article on fractures, too much emphasis, by those unacquainted with such injuries, is generally laid upon this, if not unimportant, at least uncertain distinction. Not long since I was amused to hear a medical gentleman endeavor to defend himself against a charge of malpractice in the treatment of a broken fibula just above the ankle, on the ground that the fracture was oblique, and therefore difficult to adjust and retain in place.

The symptoms of a fracture just below the trochanters, are quite marked, and have already been indirectly alluded to. In connection with the angular deformity and shortening, eversion of the foot from the weight of the limb will sometimes be observed, as well as inability to move the limb on the part of the patient, crepitus, &c.

Treatment.—Various plans of treatment have been instituted in the management of this injury. Whichever is adopted, the shortening must be reduced, and the deviation from the normal course of the limb overcome. To effect the latter is perhaps the most difficult, especially if the limb be dressed in the straight position, on account of the distress produced by the pressure upon the front of the thigh, over the projecting fragment. Besides, if the limb and body of the patient be not kept unusually quiet, more or less motion will take place at the fracture, which is sure to call out the reparative material (callus), in irregular forms, resembling exostoses. These rough osseous deposits interfere with the movements of the muscles, causing a protracted stiffness in the limb, and lameness.

So powerfully do the psoas magnus and iliacus internus muscles assisted somewhat by the pectineus, elevate the upper fragment, acting as they do upon the middle, or long end, of the lever, so that no ordinary, endurable pressure would force it back to a line with the lower and long fragment. Therefore the direction of the lower fragment must be made to accommodate itself to the direction of the comparatively fixed state of the upper. This can be best accomplished by flexing the knee, and placing the limb in a double inclined plane. The patient's body, at the same time, must be supported almost in a sitting posture, to relax the muscles that extend from the trunk, abdomen, and pelvis, to the thigh. Various contrivances to effect double inclination, combining means for extension and counter extension, are in use, among which the best known are M'Intyre's splint, from having been invented by a surgeon of that name, in Newcastle, and a modification of it called Liston's splint, and even modifications of both now used in the United States. So far as double inclination is concerned, these splints are no better than the common fracture box observed in the diagram; and if extension and counter-extension be trusted to the weight of the leg and its fastening to the foot-piece acting in one direction, and the weight of the body and



This diagram shows the dressing for a fractured femur below the trochanters. The limb is in a fracture box of double inclination, extension being made by means of a weight, which is connected to the lower part of the thigh through adhesive strips, and a rope passing over the foot round of the bed, like a pulley.

The leg to the knee is enveloped in a roller bandage, and along the thigh are seen the ends of Scultet's, or the 18-tailed bandage, the ends of which are temporarily laid off to examine the limb at the seat of injury. (From Nature.)

thigh in the other, those elaborate pieces of mechanism have no advantages over the rude box that may be constructed extemporaneously. It is a great mistake with some surgical instructors that they advise, from habit or carelessness, the most complicated and costly apparatus, and such as is adapted only to hospitals. Simple means are commonly the most effectual, and lie within the reach of all. It has been said that we should bring down our mechanical contrivances to the comprehension of the dullest capacity. This is a good rule, and should be as far as possible, adhered to: for, simplicity combined with utility, is excellency in these things. The surgeon should fulfil his intentions by the fewest means, and combine in his implements all that is useful, and nothing that is superfluous.

In a majority of cases the dressing represented in the diagram will secure perfect union without deformity. A pillow laid in the box affords a soft cushion for the limb to rest on. The foot and leg as far as the knee, should be enveloped in a spiral reversed bandage, to prevent capillary congestion, œdema, etc., and the foot may be fastened to the end of the box, to steady the limb,, and prevent eversion. To secure extension when there is a great tendency to shortening, long strips of adhesive plaster are to be stuck to the sides of the thigh below the fracture, and should extend beyond the knee and there be fastened over the ends of a short block, to which one end of a strap or rope is made fast, while the other passes over the rail connecting the foot posts of the bed, and to a distance below, where a brick or "jackstone" is suspended, securing all the advantages of a pulley.

By this means, extending power is applied in a direct line with the thigh in the flexed position, while in those splints which derive extension by means of a screw in the foot piece, the force acts over the angle of a double inclined plane.

The muscles and structures of the thigh are to be kept steady with the "18-tailed" or Scultet's bandage, the ends of which on one side of the thigh are seen in the diagram, hanging down, being laid off while the limb is examined. This part of the dressing is to be replaced by beginning at the knee, laying one end of each strip snugly over the other, until all are brought over the front of the thigh. The last one only needs fastening with a pin, the others being bound each by the one that succeeds it. On the front of the thigh, and over the bandage of strips, if the upper fragment be inclined to tilt forward, a well-padded curved or pasteboard splint may be placed, and secured with tapes tied around all. The advantages of this dressing for a fracture below the trochanters are too apparent to need comment. When an examination of the thigh is necessary it is easily exposed, and the dressing replaced, all without disturbing in the least, the other parts of the dressing, or moving the limb.

To be sure that no shortening be taking place, the distance between the great trochanters and the patellæ should be occasionally measured, and the weights of the extending apparatus modified accordingly. Generally with the leg upon a double inclined plane, a light weight will make the necessary draught.

It must be enjoined upon the patient not to turn the body from one side to the other, as the rotary motion of the trunk carries with it the upper fragment of the fracture, while the lower one and the leg continue as they were placed ; hence arises a species of deformity of every day occurrence, the most common instance of which is eversion of the foot. Some young patients are so uneasy, and difficult to control, that it may be necessary to fasten with a screw, a narrow strip of board to the *leg*-part of the fracture box, the piece of board or splint being long enough to extend to the arm-pit, where the body is to be held to it with tapes or bandages, encircling the chest. This will prevent any rotating or lateral motion of the body, which is not participated in by the limb, and *vice versa.* In one case my little patient was so perpetual in its motions, that I was obliged to fix a long splint upon the well-side, extending from the axilla to beyond the sole of the foot, having a cross-piece connecting with the foot-piece of the fracture box. By this arrangment the motions of the body were restrained, and a proper union of the fragments secured.

Many surgeons, both in this country and in Europe, bandage the limb in the straight position, from the toes to the hip, then apply on each side of the thigh splints of pasteboard, leather, or thin wood, extending on the outside, from the knee to the great trochanter, and on the inside from the groin to the inner condyle. These splints are retained in place by three or four tapes tied at intervals, and Desault's or Liston's long straight splint, extending from the thorax to a distance beyond the bottom of the foot, is made fast to the limb and body.

The long splint has notches in its lower extremity, or a foot-board, to which the foot is fastened by means of a gaiter, to secure extension, and holes near its upper extremity, into which perineal bands are tied, to produce counter-extension. Where the splint rests upon prominencies, cushions must be placed, to avoid excoriation.

Drs. Physick, Horner, and Hartshorne, of Philadelphia, have made improvements upon the splints of Desault and Liston, but as they involve the same principles, and are not pre-eminently superior to the original contrivance, it is not deemed of sufficient importance to describe them.

In treating all fractures of the leg, and in whatever manner, it becomes necessary to guard against irritation, excoriation and ulceration, by watching the parts where the dressings rest. The heel and the perineum are intolerant of much pressure, consequently extending and counter-extending forces applied to them will be badly borne.

CONSTITUTIONAL SYPHILIS—BUBO.

BY A. B. JACKSON, M. D.

Several months ago I contributed to the College Journal, an article on the "Origin of Syphilis," and another on "Its Primary Appearances and Treatment." As the disease is not always cured in its primary or local form, but is allowed to become constitutional by absorption of its virus, I propose to offer a few remarks upon this variety of it. The virus of a primary venereal sore or chancre having entered the lymphatic system, may manifest itself by attacking the inguinal glands, or leaving these unharmed, pass into the general circulation, contaminating all the fluids and solids of the body, and effect the mucous membrane of the fauces with low forms of ulceration, or the skin with a characteristic eruption. Any one of these states is considered a *secondary* or constitutional manifestation of the disease. When the venereal virus attacks a lymphatic gland in the inguinal region, the difficulty is called a Bubo, from a Greek word signifying groin. Yet glandular enlargements from other causes, when located in the inguinal region, are sometimes called buboes, especially if the affection seemingly depends upon any genital derangement. There are, however, painful swellings of the inguinal glands, that are in no way connected with venereal disorders. All are familiar with cases of this kind in children, who from long exposure of the feet and limbs to cold and dampness, have slight swellings in the groins, which they call kernels. Such enlargements are not likely to suppurate, and if they should, the pus would not possess more virulence than that of a common abscess. The contents of a venerial bubo when it has gone on to suppuration, will upon being inoculated into any part of the body, produce a real chancre, and in this way the true character of an inguinal swelling may be determined.

Another important point to be considered is, that buboes of a syphilitic character, according to the observations of many distinguished surgeons, and as subsequent constitutional symptoms seem to prove, may arise without any previous chancre, primary ulcer, vesicle, or perceptible abrasion upon the genital organs. In such cases the virus is supposed to enter the circulation by direct or *physiological* absorption, through the exceedingly thin covering of the glans penis, or lining of the prepuce. No case of the kind has certainly come within the observation of the writer, as the patients who declared such a condition, may have had an abrasion of the parts, a vesicle or pustule without their knowledge.

A bubo most frequently arises from chancre; it may appear within a few days after the disease is known to exist, or what is generally the case, come on after the chancre has existed five or six weeks. Cases have occurred where no inguinal enlargement was observed for several months after the primary sore was healed. In such cases the poison is supposed to lie dormant, there not being activity enough in the virus to infect the parts it lies in contact with, until some exciting circumstance developed its forces.

There are other peculiarities about this *accidental* form of syphilis that may be worth mentioning. Venereal bubo effects males most frequently, and those who are most careless about cleanliness and other hygienical influences. It is still further observed that buboes oftenest follow chancres on the prepuce in males, whilst venereal ulcers upon the meatus urinarius of females seem to be the most prolific of the inguinal affections. The superficial absorbents, it would seem, most readily take up the virus; and when the chancre is located on the right side of the median line of the body, a bubo is developed on the same side, and *vice versa*. Cases varying from these generalities have happened, but no oftener than anomalies in other diseases.

A venereal bubo comes on in about this way; after a chancre has existed for a number of days or weeks, or after a suspicious intercourse, one of the glands near Poupart's ligament attracts attention from its producing a little tenderness to the touch, or in walking; at a little later period quite a swelling will be perceived in the groin, and it has grown quite sensitive; and these symptoms increase in prominence until the tumor becomes important from its size, or distressing from pain. A bubo like other forms of abscess, may arrive at maturity rapidly, or be weeks in coming to suppuration. The pain too, attending its progress may be excessive, or hardly worth noticing. When suppuration is well established in a bubo, the pus usually finds its way to the surface by ulceration, where it is discharged, but the superficial facia covering the inflamed gland is so dense, that not unfrequently the pus will burrow and travel in various directions, causing a great deal of additional and unnecessary mischief.

During the rise and progress of a bubo, the local inflammatory excitement often becomes general, and the fever thus established demands no small share of the physician's attention. The constitutional fever, however, will generally subside as soon as the local inflammation is dispersed, or suppuration has made its appearance.

A variety of bubo that assumes a most perplexing character, is the indolent, scrofulous inguinal enlargement, which has been considered by some writers, as *non-venereal;* but as arising from an enfeebled or depraved constitution of the body. Be this as it may, in regard to its specific character, I am quite sure that a bubo often forms in strumous subjects, when one of the deep-seated inguinal glands slowly takes on enlargement, and may attain the size of a pigeon's egg without the least alteration in the integuments over it; it gives but little pain or inconvenience, except the patient engage in violent exercise, and so trifling does the affection seem to him, that he allows it to go on a considerable time before he thinks of applying for advice, although a quick pulse and attacks of headache, have convinced him that something was interfering with his general health. The bubo, often going on in this way for a month or two, breaks of itself, without having *pointed*, and discharges pretty good pus, and everything appears to be doing well, but another enlargement arises in the vicinity of the first, which is equally mild, and equally indolent; and this may be followed by a third tumor, or more, until several half fistulous openings are discharging matter of a bad quality, and the parts evince little disposition to heal. The points of resemblance and difference between a syphilitic and a strumous bubo are not always plain, yet the former is more rapid and painful in its progress than the latter, as has just been indicated; the scrofulous bubo is found in the deep-seated glands, while the venereal is confined to the superficial set. But unfortunately for a ready diagnosis, there are cases which present both varieties blended, scrofulous glandular tumors in the groin becoming complicated with venerial infection. From what has been said, it will be inferred that to form a correct diagnosis as to the character of every inguinal tumor, is not always an easy matter. An aneurismal swelling, hernial protrusion, or simple tumefaction of the inguinal glands from injury of the toe, foot or leg, may appear very much like a bubo, yet how important to the health and life of the patient, and the reputation of the physician, that the case be well understood from the beginning.

Treatment.—The early treatment for *venereal* bubo is to arrest its progress before suppuration sets in; and a simple inflammatory tumor of the inguinal glands is to be managed on the general principles for reducing local inflammation. The irritation is to be subdued by the application of refrigerants and anodynes, and few agents possess these qualities more eminently than a solution of cyanuret of potassium. It may be used at the strength of from three to six drachms to the pint of water, and be kept in contact with the part, by binding to the groin a pledget of lint, which should be kept constantly wetted with the solution. A dilute tincture of aconite, or infusion of stramonium leaves will answer about the same purpose. I have succeeded well by applying to the surface of a bubo a plaster of the extract of belladonna. By using faithfully any of the above agents during the formative stage of bubo, very rarely will suppuration supervene. During the treatment of bubo, curative measures instituted to insure the healing of an existing chancre should not be relaxed, but everything be done as though no inguinal difficulty was present, bearing in mind however, that the venereal disease has become constitutional, and must be subdued by the internal exhibition of gold, or the iodide of potassium, or of both.

In the treatment of bubo, as in other forms of syphilis, it has been customary for many of the medical profession to use mercury locally and constitutionally; but the incompetency of that agent to cure syphilis need not be referred to here, as the subject has been thoroughly discussed, even to the settlement of the question, by Prof. C. H. Cleaveland, in the College Journal, Nos. 3 & 4 of Vol II. I will only extend the evidence against the use of the mercurials by quoting a few lines from Prof. Abraham Colles, of Dublin, who is considered pretty good authority upon the subject at issue. Speaking of the peculiarities of bubo, he says: "There are some men who are particularly prone to bubo—in whom a *very* small quantity of mercury will cause it. I had a patient who I was aware, had this peculiar disposition. I began cautiously with him, yet five grains of blue pill every night for seven nights, brought on bubo." (*Colles' Lectures.*) Again the same author says: "Are we to give mercury in every stage of the disease? Some say yes, for you save time:—now, I think differently, and that you will often *lose* time by the practice; a man comes to you with a slight inflammation of the gland; you give him mercury, and perhaps push its use the farther, as you find the affection of the gland not subsiding under the moderate employment of the medicine, and the result is, that you make that bubo suppurate; but that is not the worst, for the suppuration so induced will be ten times more troublesome and tedious than a suppurating bubo under other circumstances; it, in fact, causes fever and disturbance of the constitution, and whenever a local cause brings on fever, there mercury will disagree."

As soon as it is perceived that a syphilitic bubo will suppurate, either from a want of treatment, or in spite of it, the process of suppuration should be hastened as much as possible, to prevent absorption of the virulent pus, by applying to the part affected warmth and moisture, which may be most effectually done by using a poultice. Let this be a generous one, and composed of almost any emollient and relaxing materials. I have commonly made use of pulverized slippery-elm and lobelia, and have found them efficient in favoring the formation of pus and directing it to the surface. Elm alone as a poultice constringes and puckers the integuments, and thus checks the pointing of an abscess. As soon as an accumulation of pus occurs,—which is to be determined by the doughy, fluctuating feel,—the tumor is to be opened to allow its contents to escape. Several ways are in vogue for opening a bubo; one party plunges a lancet or bistoury into the sore, while another argues that the walls of the abscess should be opened with caustics, and still another contends that the *spontaneous* method is preferable, and leaves the opening of the abscess and the evacuation of the pus to nature. Concerning these various plans, I have little to say. The spontaneous or pathological process has few advocates, and these seem to be a timid set who pursue an expectant plan until a large breach is formed in the walls of the abscess from a slough of the mortified integuments. The edges of such an opening are ragged, and it requires a long time for them to become adherent. Besides, the cicatrix left is irregular, depressed, and ugly. These, and other objections can be raised against the plan, and little can be said in its favor. Those who advocate the opening of an abscess with caustics, aver that the process allows the abscess to evacuate itself gradually, permitting it to contract upon itself; and it is thought that the stimulation of the caustic application will favor granulation and promote adhesion of the walls of the ulcer. Such alleged advantages are too theoretical to need refutation.

After a bubo has suppurated the quicker and more rapidly the pus is evacuated the better; there is less danger from absorption of the specific virus and less time and material will be required in the reparation. The most common way to open bubo by caustic, is to employ potash or the Vienna paste; and it is used mostly in strumous cases. The manner of employing it is to cover the tumor with a piece of adhesive plaster, which has a hole cut in its centre where the caustic is to be applied, the ring of plaster preventing it from spreading to surrounding parts. But the opening made with caustic in any form leaves traces in the inguinal region of some serious pre-existing difficulty. Although these are usually concealed, no person of whatever position in society cares to bear deformities of so suspicious an origin.

The plan I have generally pursued in opening buboes, has been to use a knife in the same way that I would open any abscess; and, having made the opening free and pressed out the pus, I apply to the cavity of the abscess the muriated tincture of iron to change the character of the secreting sac and the nature of any pus that may be left behind. To the walls of the bubo around the opening, I place a ring compress, putting lint within the ring next to the opening as an absorbent, and bind this part of the dressing in place with a bandage which is carried around the thigh, then obliquely around the hips, crossing the compress at each return of the roller. This dressing is to be renewed every day until the parts are sound; and at each dressing, the lint is to be wetted with the iron solution. This treatment rarely fails to effect a rapid cure, and the cicatrix will be hardly noticeable, especially if the tumor is opened before its external walls have lost so much of their vitality as to slough extensively. In cases where a scrofulous complication is suspected, I have used the precaution of making a valvular opening into the bubo by puncturing it with a lance-pointed needle through the sound skin at the lower or most dependent part of the swelling; and after carefullv pushing out the contents of the sac, shut the opening by pressure on the artificial canal. I also cover the tumor and the puncture with isinglass plaster, over which I place a compress, fastening it in the manner indicated above. I have thought this precautionary method of opening and treating scrofulous buboes preferable to a free incision with the lancet or bistoury, as the healing process seemed to be hastened by excluding the air, and pressing the walls of the abscess into contact. It is to be borne in mind, that the patient should keep as quiet as possible during the treatment of bubo, with the thigh partly flexed upon the abdomen, to relieve the tension upon the inflamed parts.

LIGHT—PHYSIOLOGICALLY CONSIDERED.

BY PROF. J. F. JUDGE.

Light being continually present in greater or smaller quantities, both in the sick room and in the habitation of the more fortunate of our race whose lot is constant health and the necessity of so regulating the supply as to promote the restoration in the one case, and the preservation in the other, of that greatest of all earthly blessings, health ; it becomes no less the duty than the privilege of the thoughtful physician, to understand the laws which regulate the supply of light which should fall upon us in either health or disease. To accomplish this, it becomes necessary that he fully appreciate the vast influence excited upon all organized beings by this potent though intangible, agent in nature's laboratory.

Who is not aware of the fact, that all vegetation springs into life and continues its existence only under the influence of sunlight? If any one doubts this, let him observe the seed planted too deeply in the soil to permit of the light of the sun ever penetrating to it, and he will find that it may die and decay, but will never germinate. Then let similar seed be planted near the surface where it will be submitted to the combined influence of light and moisture, and the result will be quite different. It will soon swell, and germinating, send forth its radical to the moist earth, and leaves to the sunlit air, and commence those curious and exact phenomena of chemistry, which ever accompany vegetable growth. Under the influence of the strong light of day, the leaves which at first were colorless, gradually assume a healthy green, a color which is always absent in plants that are deprived of the direct rays of the sun. Later, the important functions of blossoming and fruit bearing are dependent upon the sunny smiles of day for their successful accomplishment. From which it is readily seen that the wonderful phenomena of vegetable life, from germination, to the perfection of the fruit, are dependent upon the presence of this agent. Those plants which grow in cellars or where they receive but a small supply of reflected light, are always of a yellowish tint or colorless, while their tissues want solidity and their juices consistency. In other words, they are sickly, anæmic.

While the influence of light upon the vegetable kingdom is generally admitted, there are many who do not fully appreciate the fact that a similar, and if possible, a greater influence is exerted upon the animal economy through the same agency.

At a very early day, the demand of the animal economy for sunlight was sufficiently well appreciated to induce some of the ancients to have constructed upon their housetops apartments called *solaria*, devoted to sunlight bathing, in which they exposed the whole body to the invigorating influence of the unobstructed rays of the sun.

The continual occurrence of and necessity for, chemical change within animal beings, is a fact which at the present day does not admit of denial, and since chemical changes are often materially modified, or even originated under the influence of light, may it not be well to inquire what modifying influence the agent may exert both in physiological and pathological points of view in the chemical phenomena attendant upon animal life?

It is a well established fact that many chemical changes in inorganic bodies occur only in the presence of sunlight; while others take place more slowly in its absence than when it is present. The same is true of crystalization. Some bodies assume a crystalline form much more readily in the presence of light than when it is absent. Some even developing much more rapidly on the side nearer the source of light, than on the opposite side. It is also well known that the absorption of carbonic acid and liberation of oxygen gas by plants, is entirely dependent upon the presence of light. In the night, or when in the dark, they absorb oxygen and liberate carbonic acid, the reverse of that which takes place in the presence of sunlight. Light is therefore necessary to their growth, since they doubtless derive their carbon from the atmosphere. Such facts in regard to the influence of light upon minerals, and vegetable growth, lead us to expect that the same agent exerts an influence upon animal development which cannot be disregarded by the physiologist or careful physician.

The stimulating influence of sunlight upon animal beings is evident from the greater development in temperate than in polar climates, of those which are capable of existing in both. It was at one time supposed that the chemical power of light in the torrid zone, far exceeded that of the temperate; but since photography has become an art, the idea has proven to be false, since quite as great chemical changes are produced, and with equal rapidity in temperate as in equatorial regions. To many animals the diminishing quantity of sunlight in autumn is the forerunner of death; while to others it proves the initiative to a condition of temporary suspension of vigorous life known as hibernation.

The slumberer on the approach of the morning light feels its genial stimulation wrapping his form with a mantle of electricity, and responds to the same, awaking refreshed, renewed for the labors of the new-born day. And it is only upon the withdrawal of light that most persons in a normal condition can indulge in that luxury, a quiet sleep, showing that light is a stimulant, darkness a sedative. These properties are fully exhibited in their effects upon the invalid. To febrile patients or those suffering from headache, light admitted into the apartment lends new arrows to their torments, while draping the windows so as to exclude light, exerts a soothing influence often more potent and agreeable than that of any other sedative that can be administered.

That light is a necessary stimulant to the animal economy, none can doubt; for where the inhabitants of any country are exposed freely and frequently to the light of day, other circumstances being favorable, there will be found health, fine forms, and elastic minds. But where the inhabitants are shaded by high mountains, or high city walls, the reverse will inevitably obtain. In those locations of Switzerland where goitre so frequently occurs, the full light of day is seldom seen; and the direct rays of the sun scarce ever penetrate those deep and dismal vallies filled with pestilence and almost endless night. In similar locations in other countries a large portion of the people are deformed and prematurely old, and their countenances are frequently cadaverous and distorted. In many mines the operatives spend years and often their whole lives beneath the surface of the earth where they are necessarily totally deprived of daylight; these and their children are nearly all of them decrepid, deformed, and anæmic.

Some years ago, canals were the great arteries of commerce in England, and gave employment to a very large number of horses; these animals were frequently kept in stables built under ground, and therefore in the dark. It was found that those horses which were thus stabled became lame, sick, and broken down, very much more frequently than other canal horses more favorably domiciled. So great was this evil that the Government at length prohibited the use of subterranean stables for horses, and thus protected that noble animal from this abuse.

The deleterious effects of long continued darkness are graphically sketched by our lamented countryman Dr. E. K. Kane in his narrative of his Arctic Expeditions. "For months darkness reigned supreme; during 124 days, the sun remained below the horizon, while 140 days elapsed before his first ray leaped over the cliff in whose shadows lay the brig. As the darkness increased, so increased disease. Animal life languished: not for want of exercise, for theirs was a life of continuous toil; not for the want of pure air, for there was no malaria, no pestilential gases; but life ebbed for the want of the invigorating, stimulating influence of sunlight. "Towards the close of December, Dr. Kane writes: "In truth we were all of us at this time undergoing changes unconsciously. * * The complexions of my comrades, and my own, too, were toned down to a peculiar waxy paleness; our eyes were more recessed and strangely clear. Complaints of shortness of breath became general; our appetites were almost ludicrously changed, * * and our inclination for food was at best very slight; more than this, our complete solitude, combined with the perpetual darkness, began to affect our *morale.*"

Again, in his "Arctic Expedition" he says: "The influence of this long intense darkness was most depressing. Even our dogs, although the greater part of them were natives of the Arctic circle, were unable to withstand it; most of them died of an anomalous form of disease, to which I am satisfied the absence of light contributed as much as the extreme cold. * * Generally they perished with symptoms resembling lock-jaw." The value of sunlight cannot be as fully appreciated by us as it was by those unfortunate voyagers. Ice-bound and entombed in night as they were, a thrill of joy must have possessed them when the first ray of approaching spring breathed its vivifying influence upon them, and mantled them once more in a robe of light. Dr. Kane's account of this period of their Arctic history is full of poetry and significance. "The day" he says, "is beginning to glow with the approaching sun. The zenith, at noon, has an almost orange tinge. In ten days his direct rays will reach our hill-tops, and in a week after he will dispense his *blessed medicine* among our sufferers. The coming sun will open new appliances of moral help to the sick, and give energy to the hygienic resorts I am arranging at this moment. * * For the last ten days we have been watching the growing warmth of the landscape as it emerged from buried shadow through all the stages of distinctness of an Indian-ink washing, step by step, into the sharp bold definition of a desolate harbor scene. We have marked every dash of color which the great painter, in his benevolence, vouchsafed us; and now the empurpled tints, clear, unmistakable, the spreading lake, the flickering yellow, peering at all these wretches! Everything seemed superlative lustre and unspeakable glory." Again, "I saw the sun" says he, "once more, and upon a projecting crag nestled in the sunshine. It was like bathing in perfumed water."

The condition of these Arctic voyagers was an extreme one, that of long continued total darkness. But we find the same effects produced nearer home, though perchance in a less degree, in the dismal, dark cells of prisons where anæmia, disease and death are the frequent visitors.

It is a well established fact that the operatives in manufactories, other things being equal, are more healthy in proportion to the greater number and size of the windows in the work-rooms, and their distribution so as to admit the light uniformly throughout the day. The same law obtains in regard to dwellings. So true is this that frequently a family long accustomed to disease, will be effectually restored to health by a removal from an ill-illuminated residence to a house containing more and larger windows, allowing to its inmates more of nature's stimulant, a greater abundance of light.

The color of the walls of rooms is of much greater importance than is usually supposed. White is the natural and the best color for this purpose. A tint between a yellow and green is the worst, usually giving rise to nausea and headache in persons of even moderate nervous sensibility. A writer upon this subject remarks: "In rooms of equal ventilation, light and drainage, some of which had white walls, others yellow or buff-colored, the occupants were not equally cheerful and healthy. Those in rooms with colored walls were all inclined to melancholy, and complained of pains in the forehead and eyes, and were unable to work. By having the color removed and replaced by white-wash, uniform health and cheerfulness were afterwards secured."

The voluntary banishment of a large portion of city females from sunlight is one of the greatest physical evils attendant upon modern civilization. It is doubtless the chief cause of the debilitated condition of many females; a subject of universal remark and regret among the members of our profession. Upon this subject of banishment from light, Dr. Tilt, very justly remarks; "when infants are deprived of a free supply of pure air and light, scrofula is the consequence. Let this teach parents to accustom children from an early age to the health-giving influence of air and light; for doubtless their careful avoidance by so many young ladies, who are fearful of walking out while the sun is powerful, helps to account for their sickly appearance, the loss of consistency of their bones, and their being able to afford but a deformed temple to the immortal soul."

One of the most scientific and observing travellers of the present age, after remarking upon the fine physical developement of many uncivilized nations, says: "If the beneficial effects of exercise in the open air and exposure to sunshine were better understood in our civilized countries, we should be consulted by fewer girls whose spines refuse to support their slender weight, and we should be less frequently obliged to prop up with steel, a body by nature destined to be erect."

An excess of light may sometimes prove hurtful; this is shown in the fact that during winter when the surface of the earth is coated with snow, the dazzling light reflected immediately upon the eyes, gives rise to a condition well known by the name of snow-blindness. The same effect is produced when one looks directly at the sun, the vision soon becomes indistinct from over stimulation of the retinal filaments of the optic nerve. It is stated by pretty good authority, that long exposure of the eye to intense light has given rise to partial and even total amaurosis. Egyptian Ophthalmia, a variety of purulant ophthalmia so common among the inhabitants of Egypt, and which proved such a scourge to the hostile armies of France, is doubtless caused by the sandy surface of the country which powerfully reflects the almost vertical rays of the sun upon the eyes of the traveller, and by over stimulation produces nervous prostration of the organ. Excess of light frequently produces upon those unaccustomed to it other unpleasant effects, such as blistering of the skin, freckles, etc.

Light may be resorted to as a remedial agent in all diseases characterized by imperfect nutrition, such as anæmia, chlorosis, rickets, cachetic and scrofulous conditions, feeble circulation, œdematous limbs, and indolent ulcers. In the latter it has been applied in a concentrated form by the use of a lense to arouse the ulcer to a more healthy action. Dr. Edwards has advised in climates where it is practicable, that scrofulous and rickety children should be exposed in a nude state to the solar light to promote their restoration to a more healthy form. In that form of amaurosis in which the defect arises from a want of normal activity in the retina, Hufeland has succeeded in effecting cures by the admission of strong light to the eye; its application requiring care and correct diagnosis.

In some conditions of the eye, resort to colored media or glasses is attended with happy results. In such cases a gray tinted glass will generally be preferable to all others as being most agreeable to the eyes. In some instances violet, blue, or green may be desirable but will usually be found inferior to the neutral or "twilight tint" already mentioned. Darkness, or the absence of light, exerts a powerfully sedative influence upon the nerves, and should always be resorted to in diseaes where there is much vascular excitement or nervous irritation. In inflammatory conditions of the brain, headache, mental excitement, or delirium, in fevers in general, the stimulating properties of light are to be avoided. After parturition, severe wounds, or surgical operations, the withdrawal of light will be found highly advantageous. Darkness is also advisable in the severe forms of small-pox to prevent the formation of pits which the chemical properties of light are so prone to produce by enhancing the chemical action in the pustule. Darkness also promotes sleep, and should be resorted to in cases of wakefulness to promote the rest and quite of the patient.

EDITORIAL DEPARTMENT.

THE ECLECTIC COLLEGE OF MEDICINE.

As the commencement of the winter course of Lectures is near at hand, and some of our readers may not be acquainted with the history of its Corporate existence and the laws of the State of Ohio in regard to Colleges and all institutions having corporate privileges, we repeat in brief what was published in the College Journal for January 1857, in regard to the College and the law under which it has its corporate powers and privileges.

In 1852 the Legislature of Ohio passed an *Act to enable the Trustees of Colleges, Academies, Universities, and other institutions for the purpose of promoting Education to become corporate*, by which all properly organized and endowed institutions could become *special* corporate bodies; and the Legislature thus became freed from the labor and responsibility of investigating the many claims which were made upon them for separate Acts of Incorporation. By the passage of this General Corporation Act, the intention was that *all* future Colleges or Universities might come under this general act, and such has been its workings from that time forward to the present, and *no* such institution has desired, or could have obtained, a corporate existence except in accordance with the provisions of this general law. In fact, this general law was supposed to be superior to former acts under hasty and imperfect legislation, and hence it gave the privilege to all previously established institutes to come under this general law, provided they would comply with its requisitions.

No institution previously chartered, had given to it any powers or privileges superior to those guaranteed by the general act, and as most had granted them *less* power, many have availed themselves of the retrospective clauses to increase their powers and privileges, and have again become incorporated under this law.

In 1853 the former act was amended by specifying more particularly the steps necessary to be taken, as well as the amount of property requisite for any College to obtain special corporate powers. In accordance with the law as thus amended the Corporators of The Eclectic College of Medicine applied to the proper authorities for the appointment of Appraisers, and received in due time the following:

AUDITOR'S OFFICE, Hamilton County, O.
Cincinnati, Dec. 23, 1856

To all whom these presents shall concern:

WHEREAS, E. C. Baldwin, John F. Torrence, and Charles Thomas, were, as judicious and disinterested freeholders of Hamilton county, in the State of Ohio, on the 27th day of November, 1856, by me appointed appraisers to appraise the goods, chattels, choses in action, and all other effects belonging to an institution known and designated as "The Eclectic College of Medicine," to be located in said county, as stated in the application of Joseph R. Buchanan, Wm. Sherwood, A. Jackson Howe, C. H. Cleaveland, Jas. C. C. Holenshade, John King, Wm. A. Ashton, A. H. Wells, Wm. C. Sheppard, and Wm. S. Sampson, five of whom are resident freeholders of said county; and whereas said appraisers, after being duly sworn according to law, have discharged their duties and returned to me a schedule and appraisment of the property of said institution, amounting in the aggregate to five thousand two hundred and thirty dollars, twenty-five cents. It is therefore certified that the aforesaid proceedings have been had in strict accordance with and conformity to an act of the General Assembly of the State of Ohio, entitled "An Act to enable the trustees of colleges, universities, and other institutions for the purpose of promoting education, to become bodies corporate." Passed April 9th, 1852, and the act amendatory thereto, passed March 11, 1854.

{L. S.} In testimony whereof, I have affixed my official seal and signature, the date first above written.

J. DAN. JONES,

Received and recorded Dec. 23, 1856. Auditor of Ham. Co., O.

STATE OF OHIO, } *SS.*
HAMILTON COUNTY, }

I, John W. Carlton, Recorder of, in, and for said county, do hereby certify that the foregoing is a true and correct copy, as appears on record in my office, Book of Corporations, page 168.

{L. S.} In testimony whereof, I have hereunto subcribed my name and affixed my official seal, this 24th day of December, A. D. 1856.

JOHN W. CARLTON.

Recorder of Hamilton Co., O.

From the foregoing, it will be seen that The ECLECTIC COLLEGE OF MEDICINE complied with all the requirements of the laws of the State, and acquired for itself a Charter fully equal to that of any College or University in the land, and its Graduates receive to themselves all the powers and privileges that the State has power to confer upon the graduates of any University.

The question is sometimes asked in regard to practicing medicine in the Canadas and other British provinces. *No Medical College in the United States* has the power to grant Diplomas which empower the holder to collect fees for professional services in the British provinces. Only those who pass an examination before the Provincial Board of

Examiners, and have *their* license to practice, can collect their fees; and graduates from New York and Philadelphia Medical Colleges in this regard are exactly on a par with ours, and all others.

BOOK NOTICES.

The Southern States' Medical University. An Exposition of the plan, character, objects and claims of this Institution upon Southern Citizens and Physicians: By Geo. W. L. Bickley, M D., (of Virginia) Professor of Physiology and Medical Jurisprudence in the E. M. Institution; author of History of Tazwell, Physiological Botany, Positive Medical Agents, etc: Editor of Bickley's Critique, West. American Review, etc; founder of the Jefferson His. Society; member Am. Phi. Society, West. Acad. of Nat. Science, etc., etc. Columbia, S. C.

Some months since a pamphlet bearing the above lengthy title was sent abroad from this city, and its author and the very few to whom the important secret was entrusted have waited with awe but exemplary patience the potent results which were expected to follow. As the author and his doings may be of some interest to our readers, we have decided to give them a brief notice of a production which under ordinary circumstances we might not even allude to.

After a very absurd and very unsuccessful effort to rouse a *sectional* feeling of one part of our country against the other, he gives his *plan* of the *Southern States' Medical University.* "The building as seen in front is represented on the second page of this pamphlet. It may be thus described: It is composed of the main shaft and two wings like the letter T. The main building is two stories high, with a heavy colonnade front; it fronts one hundred and fifty feet and runs back one hundred feet. The wings are one story high, and are of the same size, viz: fifty, by fifty feet. Both wings are amphitheaters; the stories are twenty-four feet; and the second story of the main building is twenty feet in height."

In regard to the *teachings* of this University, the author of it says: "That there may be no quarrel, schism, or misapprehension among the friends of the Institution, I have been requested to commit to paper, in a plain manner, the doctrines of the University, and the reasons for their adoption. * * * * It will be the school of no particular sect or class of physicians, but will undertake to teach whatever is true in science, and that only. * * * It need not now be asked, if the Southern States' Medical University is Homœopathic, Allopathic, Eclectic, Hydropathic, Thomsonian, Reform, Chrono-Thermal, or otherwise.

It is all of these, yet none of them. * * * Strictly speaking, *there is no such system as Allopathy or Eclecticism.* I have never yet known a strictly Allopathic school, and certainly never expect to see an Allopathic physician. So, too, I have never seen an Eclectic School."

Columbia, S. C. has been selected as the site of this University—and along with a knowledge of its structure and the principles taught therein it may be of interest to know the success of the enterprise. In a letter in regard to this matter from R. W. Gibbs, M. D., the leading physician of the city of Columbia, S. C. and Editor of the well-known Columbia Banner, he says:

"Our Post Master informs me that several letters and large packages have been received here directed to Dr. Bickley, that they lay here several weeks, when a letter from a person of that name at Cincinnati, directed him to forward them thither, which he did.

No such person as Bickley is known here, and the proposed Medical University is no doubt only in his circulars. * * * The whole affair is no doubt an IMPOSITION."

Quackery Unmasked; or a consideration of most Empirical Schemes of the present time, with an enumeration of some of the causes which contribute to their support. By DAN KING, M. D. Boston, 1858.

THIS work presents a fair exposition of the species of Quackery that are found *outside* the regular profession, and we think the value of the book might be improved had the author examined the ranks of his learned brethren, where it would not have been difficult to find an occasional inclination to cater to the whims and caprices of the patients, which he so strongly condemns in the itinerant quack and nostrum dealer.

He devotes more than one half of the work to Homœopathy which he considers as the prince of quackery, the quintessence of humbuggery, reduced to its *finest* forms. All other forms of one-ideaism receive a share of condemnation, and the author speaks strongly against the use of different names by which to distinguish different portions of the profession, and we think very justly. No man can be a liberal, intelligent physician who allows any name descriptive of any peculiar sect to be attached to his card, and be it allopathic, homœopathic, hydropathic, eclectic, or any other, it savors strongly of quackery. All intelligent physicians work not for the establishment of name or sect, but solely for the advancement of RATIONAL MEDICINE.

A Practical Treatise on the Causes, Symptoms and Treatment of Spermatorrhœa ; By M. LALLEMAND. Translated and Edited by HENRY J. MC DOUGAL. Third American Edition. To which is added *On Diseases of the Vesculæ Seminales* ; and their associated organs: with special reference to the morbid secretions of the prostatic and urethral mucous membrane. *By* MARRIS WILSON, M. D. Philadelphia ; Blanchard and Lea, 1858.

THE work of Lallemand on Spermatorrhœa has so long been before the American profession, and its character so well known, that there is but little need to speak of it now. But, as will be seen by the title-page, along with the book of Lallemand, the publishers have presented the little book of Dr. Marris Wilson, making an addition of about fifty pages of matter by no means inferior to that which precedes it.

As all are interested in the diseases of the male organs of reproduction, and as a diseased condition of them so often obtains among all classes of society, we feel we are conferring a favor upon our readers by urging all who do not already own it, to become possessed of this Treatise.

How Plants Grow, a simple introduction to Structural Botany. With a popular Flora, or an Arrangement and Description of Common Plants, both wild and cultivated. Illustrated by 500 wood engravings. By ASA GRAY, M. D. New York ; Ivison and Phinney, 1858.

IN May, 1857 we had occasion to notice two of the Botanical Series of Prof. Gray. In the present book we have the *first* of the series, or the one designed as an introduction to the study. It is as useful to such as are young in the science, as to those young in years ; and for the purposes for which it was designed, it seems admirably adapted.

The entire series consists of six works, no one of which will be considered undesirable while each is complete in itself. With such aids to the acquisition of knowledge, it is to be hoped that no *medical* man will neglect to become master of the science.

PERIODICALS.

The Half-yearly Abstract of Medical Sciences. No. 27, January to June, from Lindsay and Blackiston, Philadelphia.

We have often expressed our preference for this over any other half-yearly resume of medical literature. This July Number is equal to its predecessors.

The British and Foreign Medico-Chirurgical Review, for July contains some thirty pages on "*The Bloodletting Controversy*," from which we learn that the fogy notion of the lancet is fast becoming obsolete in Great Britian. Many, very many good things find place in this Prince of Quarterlies.

The American Journal of Dental Science;
The Dental Register of the West;
The Dental News Letter; all are full of life and valuable articles.

The Scalpel, for July is as keen as ever.

The American Journal of Pharmacy. With the receipt of each number, we are impelled to earnestly urge our readers to take this and make it their own.

American Druggists' Circular and Chemical Gazette. This is properly appreciated by *the trade.*

EDITORIAL ABSTRACTS.

Quinia in Typhoid Fever.—Dr Fuller reports the case of a boy ten years of age treated by him in St. George's Hospital by the use of quinia. Ten grains of quinia were given every two hours, "and the change produced in the general symptoms were positively striking; the pulse came down, his skin was moist and cool, diarrhœa ceased, and his tongue was moist." A little wine completed the cure. He treated two other cases similarly, with like results.

Syrup of Lime.—Dr. J. H. Bill has called the attention of the profession to the *solvent power of simple syrup*; and amongst the preparations he has made, is the syrup of lime. He prepares the syrup by adding two parts of water to one of simple syrup, and pouring the mixture upon unslaked lime and letting it stand four months, when the clear liquid may be removed by means of a pipette or syphon.

In acid dyspepsia, hysteria, common diarrhœa, and in the lithic diathesis it must be very useful.

Piles.—Nitric Acid.—Dr. Dixon fully endorses the treatment of this troublesome disease as given by Prof. Howe in the College Journal for November last. He says: "The application of the remedy requires great experience and care, and those who are not perfectly familiar with its powers and the appearance of the membrane in every condition, had better not attempt its use. Properly applied it will cure every case."

MISCELLANY.

POISONING.

Dr. POPE appears to be wholly in error in regard to the case of the Teacher which is cited as illustrating his idea of the action of Osmosis, who became overpowered by the gases escaping from the stove which was overthrown.

The acid which nearly destroyed the life of the teacher was neither carbonic acid, or carbonic oxide, but one formed by a mixture of them both, and containing beside a peculiar empyreumatic matter that is poisonous and deadly in its action on the human organism. This has been established by many observers, as Berzelius, Hunnefield and others. It poisons the blood-mass, and through the blood, all the organs through which that fluid flows, but particularly the brain and spinal marrow. It altered, in my opinion both the blood, and the life-force of the nerves.

If the Doctor had made use of a plentiful effusion of cold water, and had *not* resorted to the diaphoretic teas, his treatment would have been more scientific and rational. The use of the teas appears uncalled for. A strong infusion of coffee must have proved very beneficial.

T. C. MILLER M. D.

ERRATA.

MESSRS EDITORS:—In some of my contributions to your Journal I discover that some errors have obtained, which resulted possibly from some illegibility of my manuscript. But no matter how they resulted, you will oblige me by giving place to the following corrections.

Vol. III. No.6, p. 247, 10th line from the top, for *usages* read *resources.* Also on p. 250, 7th line from the bottom. for *oblongated* read *elongated.*

Vol. III. No. 7, p. 298, 5th line from the bottom, for *nervous* read *venous.* Also p, 299, in 12th line from the top, for *nervous* read *venous.*

WM. BYRD POWELL M. D.

MARRIED.

At Hartford, N. Y., August 9th, 1858 by the Rev. J. E. King, B. W. KING, M. D., Prof. of Physiology, in Fort Edward Institute, to MISS ELIZA A. PALMER, of the former place.

THE

COLLEGE JOURNAL

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VOL. III. OCTOBER, 1858. No. 10.

ORIGINAL CONTRIBUTIONS.

THE FUNCTIONS OF THE CEREBELLUM.

BY PROF. W. BYRD POWELL, M. D.

Introduction.—There is probably no other portion of the animal organization about the function of which so many widely different opinions prevail, as of the cerebellum; and yet I really believe that in nearly all of them, there exist a few grains of truth. The opinion of Rolando should perhaps be regarded as one of the exceptions, for he thinks the cerebellum is an electro-galvanic apparatus. The principal source of error seems to be the regarding this viscus as a single organ.

Dr. Solly in his excellent work on the brain, p. 261 says that "the extensive surface of vesicular neurine, which constitutes the ganglionic portion of this encephalic centre, shows that it must perform some very important office in the animal economy; that it must, in fact be a ganglion, or series of ganglions of great power." "There can, I think, be little doubt but it is a regulator and co-ordinator of muscular action." He again adds, "it certainly would appear to hold seme relation to the generative functions." "The pathological and other facts adduced by Drs. Gall, Nemont and Boussais on this subject, are very striking, and almost as conclusive as all other physiological evidence."

I have seen no physiological evidence that appeared to me to be of much weight in favor of the cerebellum being the organ of any other function than the generative. At all events such physiological evidence has not as yet begun to equal the pathological evidence that has been observed leading to the conviction that this encephalic mass is the source of the generative function. Possibly I am biased in favor of this side of the question; certain it is, I place exceedingly little confidence in the results of vivisections in determining the cerebral functions.

To the opinion that the cerebellum is a regulator of muscular action I have an insuperable objection, which is this: the regulation of muscular action is an intellectual and not an effective function. The effective faculties cannot judge, decide, discriminate; they only produce impulses. When muscular action is to be regulated or co-ordinated, it must be for some purpose which occasions a volition. The effective powers do not obey volition. We cannot feel pleasure or pain, love or hatred by any voluntary effort we can make. I have not as yet been informed that any one claims that the cerebellum performs any variety of intellectual functions. Some thousands of years since, I believe that some one was wild enough to suggest, if not to maintain, that the cerebellum was the organ of memory. There can, I think, be no doubt that the co-ordination and the regulation of muscular action are referable to the intellect. This subject has claimed my attention for more than twenty years, and I have concluded that the faculty which presides over all special actions of the voluntary muscles is known to phrenologians as weight or momentum. Precision of muscular action I have uniformly found proportioned to the development of the organ of this faculty.

Dentists, all surgeons, mechanics and artists, have great need of a power to regulate their muscular exertions, and all expert operators of every kind will be found to have the organ of weight large. I knew a dentist some years since in whom it was small, and the way his patrons suffered for his defect would be painful to relate. He could never judge correctly of the amount of force he was required to use, and hence he sometimes used more than was needed, and the surplus never failed to inflict just as much injury upon his patient, and in this way: I saw him thrust a large instrument through a lady's cheek. Nor could he guide his instruments. I am very sure that no one of those who are defective in the organ of weight will ever operate upon me, or mine.

Dr. Draper is of the opinion that the cerebellum consists of six ganglia; three on each side of the mesial line. Are we to infer that these six ganglia are the instruments of six independent functions? He has left us to our own inferences. But so far as the cerebral functions are now understood, it is known that a pair of ganglia are assigned to each independent function. Perhaps the doctor presumed that all who should read his work would have been previously so far informed at least; but I think that this was presuming a little too much for all students. That the cerebellum comprises the ganglia or organs of three independent functions I am sure, and suspect that these are not all. George Combe, Esq., thinks that whatever functions the cerebellum may perform, the instinct of generation must have appropriated to it much the larger portion. But by what principle he was was guided to this conclusion, is more than I am able to divine.

Messrs. Gall and Spurzheim think and maintain that the instinct of generation is the function of the cerebellum. If they had contended that the generative instinct is *a* function of the cerebellum, they would have secured my indispensable endorsement (?).

MM. Foville and Pinell Grandchamp affirm that the cerebellum is the seat of sensibility. This is true; but it is not all of the truth. Having presented with some comment the most, if not all, of the opinions that prevail in reference to the functions of the cerebellum, I proceed to the consideration of the functions of this encephalic mass as I understand them.

I. AMATIVENESS.—It has been and still is, in good society, a very prevalent opinion that no one can approach this subject without great risk of pollution. But in the measureless domain of nature I know of no subject that can pollute a philosopher; nor one which he either should or would fear to approach. All nature is alike good and clear to him. Whatever is, is sufficiently important to merit his attention. Nor is there any function in either animal or vegetable life, which *the* physiologist would or should fear to investigate. Knowledge and information do not constitute the bane of the human race, it is ignorance. Before man can be properly educated and guided with reference even to his own well-being and happiness, he must be understood. A merely speculative idea of him will not do, he must be known as he is. Since the time of his great progenitor, Adam, with reference to his education and government, nothing but experiment and consequent failure has been had to this day, and what has been the final result? This may be surmised from the widely spread exclamation of war which over-hangs this and every other abode of his race, for his vices and crimes. Is it not time then that he should be physiologically developed? that the laws of his nature were determined? It must be admitted as most lamentably true that the science of man is less developed than that of any other subject. If the occasion permitted, it would not be difficult to expose the cause of this. But suppose that failures in all the arts incidental to civil society to be as frequent as are the efforts at human government, would not one first class ship hold the commerce of the world? And yet we are warned not to attempt the investigation of the most essential element of his nature lest we become polluted. Who at this hour are the most filthy and polluted, those who are the most informed, or the least informed with reference to the physiology of man? When a blush mantles the cheek it may be feared that all within is not right—that a little pollution is somewhere concealed. With this apologetical introduction I proceed to the consideration of the *instinct of propagation, or amativeness* as denominated by Dr. Spurzheim.

History of the discovery.—"Gall did not think," says Dr. Spurzheim that "there was an organ of this propensity in the brain, but discovered it by accident. Being physician to a widow who was subject to violent hysterical fits, during which her head was drawn backwards with great force, he sometimes supported it with his hand, and was astonished by the great heat and thickness of her neck. Acquainted with her character he asked himself this question; whether the size of her neck and consequent development of her cerebellum might not have some relation to her inordinate passion? Continuing observations began from this hint, he soon established the point to his own satisfaction." That such a faculty exists has never been questioned by any one however ignorant. But the independence of it may not be so generally known or conceded, therefore I will try to show it.

Independence of this faculty.—I have been active in my observations with reference to this faculty, and feel safe in announcing it to be a fact that in all of the known species of animals, this faculty is more strongly and ardently manifested by the males than the females.

Again, very frequently this faculty is not in its strength proportioned to the other faculties of the same individual. Idiots sometimes manifest unusual strength in this faculty whilst some other faculties are entirely absent and the remaining ones are very feeble. This faculty is sometimes singly or alone diseased.

Under my next heading I will furnish three very striking facts to prove that this power is frequently diseased to the exclusion of all others, which with the facts I have presented pretty conclusively shows that this faculty is not referable to any combination of faculties.

Where is the organ of this faculty?—Messrs. Gall, Spurzheim, Combe, Boussais, Vemont, Caldwell, Fowler, and the other phrenologists of whom I know anything, maintain that the cerebellum is the organ of this propensity. I am prepared to contend that the answer they afford to the question embraces much more than it demands. I aver that the mesial third of the cerebellum is the organ of this faculty.

Besides finding in every person whom I see evidence for the truth of my opinion ; I have a few very conclusive pathological facts which I now beg leave to introduce.

A gentleman in Mississippi between fifty and sixty years of age called on me for the purpose of consulting me about a pain he had in his head ; but prefaced the communication he intended to make by stating that he had consulted all of the most distinguished physicians of New Orleans, Philadelphia and New. York, but had failed to obtain any information about his complaint. * He now placed two of his fingers on the posterior inferior mesial portion of his cerebellum, one finger on each side of the medial line, and then addressed me thus : "I suffer at this point with constant soreness and pain." I now asked him what the business of his life had been. He answered "cotton planting and trading." I now informed him that it was my opinion that his disease had been occasioned by an excessive commerce with the other sex. He responded: "You must be mistaken sir, for I have a wife and eight living children." I continued, "the facts you have stated as to having wife and children do not convince me that I am mistaken." He rejoined : "I reckon sir, upon reflection that your opinion may be correct. The winter season I always spend in New Orleans, and when there I have always been a high fellow with the girls of pleasure ; but my fun is all over, I have no desire now." I continued thus : "Do you not have occasional paroxysms, beginning with a chill and followed by a sensation of heat with priapism without sexual desire?" he sprang to his feet exclaiming "you are right, you understand my case." "Now Dr. what is to be the upshot of all this?" was his next question, and I answered, "dementia and death." He continued soliloquizingly "I reckon it is right that those who dance should pay the fiddler, but the music is costing me much more than I had suspected it would. I have had my dance out and the music will have to be paid for at whatever cost." In three years he died of this affection.

A member of the legislature of Arkansas called on me who was about thirty-five years of age. He complained precisely as the preceeding gentleman did, and located his suffering in the same part of the cerebellum. He desired me to inform him of the cause of his disease. I informed him that it was my opinion that he had worshipped too frequently and ardently at the shrine of Venus. He then remarked ; "You

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* I regard it as being very far from creditable to physicians to be as ignorant as very many of them are of this subject, and yet I have seen many who, otherwise were well posted in their profession and yet appeared to be vain of their ignorance upon this subject. The Miss. gentleman possessed wealth and an extensive intercourse with the world ; and I do not doubt that he visited the most distinguished physicians in the cities he named, nor do I doubt that they were incapable of giving him the information he sought.

must be mistaken sir, for I am a married man, and a member of the Presbyterian church." In my rejoinder I informed him that as I knew of no difference functionally, between married Presbyterian men and other men, I could not conlude that I was mistaken, more especially as I had been a short time before consulted by a Presbyterian clergyman, and who just as you have done insisted upon it that I must be mistaken, and yet ultimately acknowledged that I was probably correct, and I think that you will do the same before you leave the city. He took his hat and left me abruptly. Two or three nights subsequently he and I met in a masonic lodge, and on the next day he called on me again and masonically informed me, that upon reflection he had concluded that I was probably correct as to the cause of his complaint, stating that he had not been married many months—that he and his wife loved each other very much, and that she was suffering nearly as he was; and then added that they had probably been some what intemperate. This case was not so far advanced as that of the previous gentleman's.

For the benefit of my professional brethren, I will here state that with reference to this form of disease, with religious professors I have found it to be exceedingly difficult to extract or squeeze the truth out of them. It is more difficult even than the extraction of a superior molar. In one instance I entirely failed. If I could have placed him under a steam cotton press I might possibly have squeezed it out of him. I have been consulted in seven cases of this form of disease. The seven cases I have witnessed of this form of disease leave no room to doubt either the independence of the faculty or the precise locality of its organ.

I was called out of Little Rock, Arkansas, on a very cold day, four miles in the country to see a lady. About two weeks previous to my visit she became the mother of her first child. She complained of severe pain in the mesial portion of the cerebellum, but of no soreness or tenderness upon pressure. I do not remember to have ever seen a lady with a smaller cerebellum than she had, and her whole person was equally feeble and delicate. Her husband was about as feeble a man as I ever saw in reference to the cerebellum. As she had no soreness in the cerebellum I could not infer that *it* was diseased. From all the facts I could obtain, and they were very few because her chamber was so filled with her neighbors that I could make no enquiries of a more special character, I concluded that the pain was symptomatic of ovarian disease; and from its acuteness I inferred that the disease was inflammatory and prescribed accordingly. Upon my return home, Dr. Sprague, one of the most gifted physicians I ever knew, asked what ailed the lady. I answered, ovarian inflammation. He asked again, how I ascertained that. I informed him. He fixed his mouth into a grin and walked off. He had never admitted the truth of Phrenology; but he admitted that I could guess better than any one else he had ever known. In three or four days more I was sent for again to see this lady; but being unwell I prevailed on my friend Dr. Sprague to go. He did so, and upon his return, I asked him what he supposed to ail the lady. He answered: "you diagnosed correctly, but I should never have suspected the pain in her head to have been occasioned by the ovarium; but if the ovarium sympathize with that portion of the brain, then it is the best of diagnostic symptoms." As there is no doubt that the ovarium is a portion of the generative apparatus, this case more conclusively than the preceding, determines the mesial portion of the cerebellum to be the organ in question.

This faculty appears to be more abused, or illegally manifested in man than in any other species of animals. This fact would seem to warrant the suspicion that it is more important in man than in any other animal, and as man has many more faculties than any other animal he is more liable to neglect any one of those which is common to all than are other animals; consequently the greater importunity of the instinct of propagation in man may be a provision to secure its function, and but for which its function might be frequently neglected in consequence of the devotion which mankind render to the pursuits of business and objects of ambition. Even under existing circumstances, it has been observed that those who live constantly under the pressure of business cares and responsibilities have but few children, and hence the adage, "a poor man for children."

The activity and urgency of this faculty are such in the human race that individuals are scarcely permitted to exercise prudent discretion with reference to its function; for the sexes are absolutely whipped into the embrace of each other. And hence I conclude that this importunity is one of nature's provisions to secure the perpetuity of the species.

The social influence of this faculty.—I do not pretend to regard this as a function of the faculty, but a merely incidental result. As this subject has been regarded as being of a polluting character, it is but fair to allow it justice, to give it credit for all that is good, elevating or refining, no matter whether it results directly or incidentally. If it be a matter of any moment that animal life be continued or perpetuated, then it must be conceded, that just in proportion to that importance is the value of this faculty. This is not only the life perpetuating faculty but I will show that it exerts a greater influence in making life desireable than does any other faculty.

Nature through some unknown cause has denied this faculty to some, and others have by design, and some by disease have been deprived of the ability to discharge its function. The study of these furnish us the only data, almost, of estimating the incidental influence of this faculty. Now suppose that in all those who shall be henceforth born, to possess the reproductive power of this faculty, but shall be deprived of the power of extending the incidental influence to which I have alluded and which is my present subject, we could then judge of the value of this faculty, as it even now obtains in society. Let us see now to the facts.

The natural eunuch whose skull I possess, declared to me that he had never felt any affinity for the other sex in any way. Would not all other men be as indifferent to the other sex as he was, if they were eunuchs; and if all women were deprived of the faculty of maternity would they not be as indifferent to men? You can now have a glimpse as to what society would be, but be patient for a moment and you shall have a clear view of the subject.

In 1834 I made the acquaintance of a legal gentleman, who was with men a most finished gentleman. He had been educated under the most favored influences known to South Carolina. His education was of the most finished character. So exceedingly small was his cerebellum in all its parts, but more particularly the mesial, that I suspected him to be a eunuch, and his developement verified my suspicion. He used all the means he could command to avoid the presence of women. If a servant woman went into his chamber to administer to his comfort, or into the parlor when he was in it, he would escape as rapidly as any one could be supposed to do to avoid the contagion of the plague. He would encounter any quantity of mud in the street to avoid meeting a lady on the side walk.

When a young man and actively engaged in the investigation of phrenology, I became acquainted with an affluent gentleman in the interior of Kentucky. He had a daughter of adult age, that is, she was out of her teens and had been for two or three years. This lady had enjoyed the advantages of the best education and society which Lexington, the Athens of the state could afford, and yet she as vigilantly avoided men as the gentleman above noticed did women. Although my visit continued a week, I did not see her except by stealth through her chamber window. She did not enter the parlor during my visit.

A neighboring lady informed me that she was never to be seen if a gentleman were about the premises, and that neither her family nor friends could assign any cause for her aversion to men. This information rendered me anxious to obtain a view of her head. I watched for an opportunity, and luckily one fair day whilst apparently amusing myself with some rose bushes near her chamber window, at a favored moment I obtained a satisfactory view of her, but I was greatly surprised to find her neck and cerebellum to be amply large and she a good looking young woman of an agreeable face. I felt an affinity for her and a desire to be acquainted with her. At that time my observations were guided by what I acquired from the teachings of Prof. Caldwell, and he by Dr. Gall. I supposed if the cerebellum were large enough, all was right. The lateral portions of her's were considerably developed, but the mesial portion of her neck did not project appreciably backwardly from the mastoid processes. I never comprehended her case till after I had discovered the remaining functions of the cerebellum, but her case was registered not only in my memory, but also in my notes of observations. This lady had the mesial portion of her cerebellum feebly developed as had the South Carolina gentleman. This lady in her neighborhood had the reputation of being a man hater; I do not think the charge was true. I think that she was only indifferent to them, had no affinity for their presence or society. But the gentleman above alluded too had a decided aversion to ladies; but this was education. Intellectual ladies who might be called masculine, knowing his peculiarity would thrust themselves upon his attention by attempting a conversation with him, and only for his annoyance. In this situation I have seen him writhe like a snake fast in an old Virginia fence.

Now my indulgent readers if your patience has allowed you to follow me thus far, you must I think be able to form a pretty correct opinion of what society would be if all its individuals were like the gentleman and lady whom I have introduced to your acquaintance.

If all people were as defectively developed in the cerebellum as they were, then there would be not only an end of the human race, but allowing the race to continue, there would be an end of all those gentle caresses, which are now constantly being manifested between the sexes, and which in fact render life all that is worth living for.

I now desire my readers to answer for themselves this question: Which are the most defiled, those who are ignorant of, or those who have investigated this provision of our common nature?

I admit that when the influence of this faculty is constantly extended in a sensual manner, that the results are truly degrading. But on the other hand, when expended upon our social and moral faculties, dignity, elegance and excellence are the results. I venture to assert that a really elegant and noble lady or gentleman was never seen and never will be, without a very fair endowment of the organ of this faculty. Should we abuse or libel any provision of nature because of the abuse of it? Does kind Providence possess any thing that cannot be abused?

Developement of the organ of this faculty.—The location of this organ I have indicated by stating and proving that it is the mesial portion of the cerebellum. I will now add that it is the mesial third of the cerebellum. No one who is guided by my predecessors can judge of this organ's condition. Whilst I followed them I committed numberless blunders.

Throughout the entire economy of mind so far as now understood, two ganglia or organs are appropriated to each faculty; and the case before us forms no exception to the rule. In this instance, as with many others however the two ganglia are embraced in one space indicating one organ because the two are in contact, being divided only by the median line.

I have the skull of a very notorious courtezan. The base of the occipital bone has slightly oblique longitudinal spines, which divide all of the ganglia of the cerebellum. This is the only skull I have ever seen thus marked. I infer from this circumstance that the whole of her cerebellum was active as well as large.

Place the subject in profile and then observe the neck near its junction with the head, and if the mesial portion of it extend backward of the mastoid process to a considerable distance, the decision may be that the organ is active. But if this projected portion of the neck be thin or appearing sharp, then the organ is defective in strength; too feeble for its activity. This is the development of those who contract disease in this organ. In such persons, the two organs which remain to be considered are also feeble.

The next faculty in the order of the location of its organ is that which I denominate muscular motion; but as I purpose to consider the remaining two faculties in the order of their discovery, the faculty of animal sensibility will come up next for consideration.

NEURALGIA CŒLIACA.

BY L. E. MILLER, M. D.

This disease is characterized by frequent and violent pains coming on in paroxyms, which are stinging, rapid and grinding in the region of the stomach, and such is their severity that they often cause fainting and a general state of debilitation. The pain spreads with a burning heat upwards through the breast, neck and shoulders, and downwards to the abdominal viscera. It is much aggravated by pressure. Sometimes there may be observed a violent pulsation in the epigastrium. During the paroxysms, which in the commencement of the disease are at long intervals, but as the disease advances, occur more frequently, the patient experiences dyspnœa, and agony ; and at the decline of the attack, eructations of gas, and vomiting of mucus are present. After the subsidence of the paroxysms there is present in a majority of cases weariness, debility and exhaustion, with sometimes a sensation of soreness at the epigastrium. The tongue remains in the natural condition clean, and the appetite and digestion are often not disturbed.

This affection may be confounded with degeneration of the stomach, cardialgia or gastrodynia. From the first it may be distinguished by the continued derangement of the digestive apparatus and continued vomiting in that disease, while in neuralgia of the cœliac axis the individual feels entirely well between the occurrence of the paroxysms. From the latter affections it may be distinguished by the characteristic radiation of the pain.

This disease is found to occur more frequently in the male than in the female, and usually appears about the age of thirty. It may be caused by any thing that will disturb the secretory nervous system, as irritating substances in the abdominal viscera, the suppression of continued hæmorrhoids, alteration in the quality of the blood, as in anæmia, chlorosis, purpura ; excess in coitus, masturbation, syphilitic mercurial and gouty cachexia, and lactation in delicate females, especially if prolonged.

In this country I have observed the disease frequently in females, particularly those of sedentary habits, or subject to depressing influences, either mental or bodily.

The treatment must be varied in accordance with the complications, and in the female a disturbance of the reproductive organs is a common accompaniment. Romberg states in his work on nervous diseases (p. 158. 3d edit.) a case occasioned by anteflexion of the uterus and ulceration of the neck. He recommends the free application of cups during the interval between the paroxysms. The paroxysms must be met by various narcotics and sedatives, as opium, belladonna, gelseminum etc. The acetate of morphia, dissolved in cherry laurel water or tincture of gelsemium (⅛gr. to 25 gtt.) will be found an excellent remedy. The subnitrate and valerianate of bismuth are also indicated. I use them in the following formula:

℞. Bisumth, subnit.,
Ext. Valerian, āā ʒj. f. pill No. 6.

Take five pills three times daily.

℞. Bismuth Valerianat., ʒss.
Ext. Scutellaria, ʒjss., M.

form pills No. 60; take five three times daily.

If the neuralgia assume a regular intermittent form, then quinia may be given in five or six grain doses combined with ferrocyanuret of iron. The diet must be tonic and substantial, and in most cases meat and wine may be advantageously given.

Tepid bathing, shower baths, sea baths, and a plenty of exercise in the open air, with a perfect freedom from care, business, or study are indispensible; in fact every thing that would debilitate the nervous system should be avoided.

THROMBUS.

BY J. A. HENNING, M. D.

The general idea conveyed by the term thrombus is a hard round tumor of small size and having a bluish tinge, formed by an effusion of blood in the vicinity of a vein, which perhaps has been ruptured or opened. But the term is more particularly confined to an extravasation of blood into one or both of the labia pudenda. The varicose veins of the vagina, and it is said even some of the large blood-vessels rupture, and thrombus is the result. It most generally occurs during parturition, or shortly after the birth of the child, and occasionally it is met with in the seventh or eighth month of pregnancy. Meigs and Churchill, in their lectures, treat of the disease in question as only occurring during parturition. Though in Meig's Velpeau, a very good description of it is given, showing that it occurs before parturition, and is occasionally met with in virgins.

The appearance of the affected labia by occular examination, is of a livid and dark color. The tumor is variable in size, and frequently attains to the size of a childs head. By palpation it is hard, not yielding much to pressure. If the parts do not rupture in due time, the patient will suffer most excrutiating pain. Active irritative fever may take place accompanied with delirium and retention of urine, and thus life becomes seriously endangered. Sometimes the progress of this disease is very rapid, the blood effused being in large quantity, and sometimes induces syncope. If the mucous membrane rupture at this period, it will be followed by a cessation of pain, but the practitioner must be on the watch, as hemorrhage, which is very excessive in some cases, may take place, and the patient sink. However, the tumor may remain stationary for several days without much suffering, but those are exceptional cases.

This disease is most commonly met with in cases of protracted labor, which may or may not be caused by pelvic deformity ; and will prove fatal if the appropriate treatment is withheld.

Dr. Dewees states, " that if the inner surface of the attacked labium does not burst in the first instance, the tumor is certain to yield in a short time from gangrene. A large surface of coagulated blood becomes exposed when the part sloughs, which rapidly decomposes and becomes fœtid."

In every case the practitioner should make a thorough examination, using the speculum if necessary. It may be confounded with inversion of the uterus, or of the vagina, vaginal hernia, cystocele, fribrocellular tumor of the labia, etc., unless the physician exercises much care in his examination. If an error is made in the diagnosis, the treatment might prove fatal ; and it will be readily seen that too much care cannot be exercised in the diagnosis, and it is well for all physicsans to make themselves perfectly acquainted with those diseases which so nearly resemble each other in symptoms, but in which a very different mode of treatment is required. When this disease occurs before parturition, quietude and rest in the recumbent position should be enjoined. If the tumor is small, with little discoloration of the skin, no fluctuation, and no perceptible increase of the effusion, efforts should be made to resolve it, and cataplasms of elm and flowers of St. Johnswort, or arnica should be applied to the parts, or sometimes a fomentation of hops and tansy steeped in vinegar is excellent. If the disease does not yield by this treatment, it should be watched closely, and if inflammatory symptoms arise, and even before, if it is necessary, make a free incision and remove the clots present by the fingers, and then make permanent compression with a T bandage, together with applications of cold water or ice.

If it occurs during parturition, and the tumor interferes with the passage of the childs head, it must be freely incised on the mucous surface, and the fluid allowed to escape; if it should be excessive in quantity with bleeding, it must be checked by cold applications. Sustain the strength of the patient by appropriate treatment, with nourishing diet, etc., keep down febrile symptoms with the exhibition of the comp. powd. of ipecac. et opii, or with liquor ammonia, or acetate of morphia which is better in some cases. Sometimes the urine is retained, which gives rise to severe pain, when the catheter must be occasionally introduced and the water drawn off. Attend to all the secretions and excretions of the body, with cleanliness of the parts as well as of the entire body. This is the treatment I have adopted, in the cases that came under my care, without the loss of a single case.

I could append several interesting cases but time and space will forbid it. The treatment was about the same as pointed out in this article. In some cases I prescribed small doses of tinct. of aconite, to prevent any subsequent attack of erysipelas or peritoneal inflammation.

CANCER OF THE BREAST.

BY PROF. C. H. CLEAVELAND.

As a general rule, glandular tumors of the breast are *not* malignant or cancerous; and there is no proof that tumors at one time non-malignant or non-cancerous, may after a time become cancerous. I know an opposite opinion has obtained among the people and in the profession, and that it is studiously fostered and reiterated by those who are trying to make money, as "*Cancer Curers*," from a reputation based on this and other erroneous ideas.

That such a thing as a change of character in a glandular tumor *may* occur, is possible, and that a breast with a tumor in it is more liable than a healthy breast to suffer from a malignant disease is probable, but there have been no facts observed to support this idea. On the contrary, in several specimens preserved in the Museum of St. Bartholomew, where the breast has both a tumor and a hard cancer, the cancer did not select the tumor as its seat, but another and apparently a sound part of the gland.

At a recent meeting of the Buffalo Medical Association, when the age at which the breast is liable to scirrhus was under discussion, Dr. Hamilton said he had never seen true scirrhus in the breast of a person so young as twenty-seven years. This experience led him to think that hard cancer of the breast was a disease of age—always indicating the degeneration of tissue. That one organ of the system might be old in a certain sense, while other organs were younger, as the hair fell off earlier in one case than another.

Even epithelial cancer usually occurrs after forty years of age. The breast of the female usually has cancer at the very period when its functions cease, as well as those of the uterus. These organs are then *old*, comparatively speaking. He did not deny that hereditary predisposition was sometimes manifest, but that predisposition was the same as that which leads the hair to turn gray, or the head to become bald.

A table has been drawn up of the age at which the disease in each case was *first observed* by the patients, and of the 158 cases noted:

2	were	first	observed	between	20	and	25	years	of	age.
4	"	"	"	"	25	"	30	"	"	"
9	"	"	"	"	30	"	35	"	"	"
26	"	"	"	"	35	"	40	"	"	"
33	"	"	"	"	40	"	45	"	"	"
40	"	"	"	"	45	"	50	"	"	"
17	"	"	"	"	50	"	55	"	"	"
11	"	"	"	"	55	"	60	"	"	"
9	"	"	"	"	60	"	70	"	"	"
6	"	"	"	"	70	"	80	"	"	"
1	"	"	"	above	80			"	"	"

In estimating the frequency of scirrhus at different ages from this table, it should be borne in mind, the comparatively less number of women who are alive at the different ages. And as more are alive at 20 than at 40, just in that proportion are there more who suffer from scirrhus at the latter age than at the former, *beyond the number indicated by the table*, and hence at least forty to one.

The most frequent form of cancer in the breast is the hard, or scirrhous cancer. This disease has received many names, and been described in various words, and as of different varieties; as Scirrhus, Scirrhoma, and others indicative of its hard texture; or Carcinoma reticulare, indicating its peculiarity of structure. But perhaps the best terms to use are *Scirrhus*, before the surface has ulcerated; and *Carcinoma*, after the surface is broken and ulceration is present.

Scirrhus in the breast by no means always presents a uniform appearance. It always appears to be seated in some part of the gland, but differs much in form and outline. Usually it appears as a hard mass in some part of the gland, leaving the remainder of the organ healthy or perhaps slightly withered, or it may be surrounded with more than usual adipose matter.

The *hardness* of the tumor is quite extreme, fully equal to cartilage, and like cartilage it is usually quite inelastic. Yet sometimes it has about the firmness of the walls of the heart.

This tumor seldom is larger than the gland was, or than that part of the gland was whose space it occupies. It may be much smaller than the gland originally was. Its *shape* appears to depend mainly on the part of the gland diseased; but it gathers up as it were the lobes of the gland into an irregular lump and blunts their outlines. Various names have been applied to the shapes assumed; and hence cancers have been said to be "ramose," "tuberose," "infiltrated," etc., but as the shape appears to be accidental, it seems unwise to make *varieties* depending on accident.

From the scirrhous tumor, processes, or crooked, gnarled, knotted branches may extend, which correspond to the lobes and processes of the mammary glands. But these processes are comparatively rare—and yet their occurrence had given the name *Cancer* to these diseases. Sometimes these limbs or "claws" appear to be detached from the original mass, and they have escaped removal in operations.

As scirrhus involves the neighboring tissues, it can never be made to roll or slide under the finger like a glandular tumor. It is from this involvement that the skin often dimples over the cancer, and as the disease progresses, that the seaming or wrinkling of the surface of the breast, as well as the retraction of the nipple, and the firm connection between the pectoral muscle and the deeper portion of the scirrhus take place. As scirrhus has no capsular or investing membrane like that surrounding many other tumors, the adjacent structures adhere firmly to it and render it quite difficult to dissect out, and hence the liability to leave a portion of the disease, when the breast is removed. There is often a mixture of cancer-substance, and glandular substance, but the original tissues waste away so as not to appear deeply within the scirrhous tumor.

Treatment.—In the treatment of these malignant scirrhous tumors, a great amount of ignorance and inhumanity has been manifested in the use of caustic applications over them to remove them, thereby changing the scirrhus into an open, inflamed, painful and dangerous ulcer, where the simple operation of exsection, rendered entirely painless, if necessary, by anæsthetics or freezing, would quickly and safely produce all the hoped-for results of the long continued torture by the application of salves, ointments, or caustics.

As the mode of performing amputations of the breast, together with the after management, will be detailed hereafter, the reader is referred to the subject in future pages.

The health of the general system should be kept in the most active condition, and the different eliminative organs made to perform their functions properly. The various solvents and sedatives may be administered with a view of dissolving and removing from the system such abnormal elements as obtain in it, and of allaying pain or undue nervous excitability.

Among the Dissolvents which have been found of use as internal remedies are, chloride of zinc in the 1-6 of a grain doses, repeated three or four times daily, the chloride of potassa and the hydrochlorate of ammonia, of each as much as from five to ten grains may be given at a dose, dissolved in some bland liquid ; or the chromate, or bichromate, or prussiate, or the permanganate of potassa, each given at first in minute doses, closely watching the effects produced. The system may be made to endure comparatively a large quantity, and receive no injury. The chloride of gold, and the chloride of gold and soda, will at times be found very useful.

These agents may be *tried* with the hope of checking malignant growths, or even removing them entirely ; or of placing the patient in a proper condition before exsection. But usually the knife should be resorted to, and that before the system has been too much injured by disease or treatment to place it beyond the probability of an entire removal of the disease by the operation.

During this treatment, and after an operation when one is resorted to, as has been remarked, anodynes may be demanded. As conium maculatum is reputed a dissolvent as well as anodyne, it has been frequently used in this class of cases, and many tumors, supposed to be malignant, have disappeared under its administration. It may be given in substance or in tincture, or fluid extract; but as the extract is very liable to undergo chemical decomposition it should never be depended on.

Hyosciamus, stramonium, and aconite, may also be used, as these and conium are not liable to the objections which obtain against the various preparations of opium. Opium, or its preparations should not be resorted to if their use can be avoided.

A form of malignant disease of the breast sometimes confounded with scirrhus, and which indeed is hard, but not at first located in the glands of the mammæ, is that in which the nipple or skin are first attacked.

These diseases, are to be treated in the same way as those just described. Both these forms of disease may attack the breasts of the male, but females are by far the most liable to them, and their greater liability has been estimated as high as 98 to 2.

After an uncertain period of time and growth in scirrhus, *ulceration* almost universally follows if the tumor be not removed, and the disease assumes the second form or that of Carcinoma.

To change a Scirrhous cancer to a Carcinomatous one, there are two modes of ulceration that seem to be natural to the course of the disease. In one form of ulceration, the ulcer commences externally and extends inwards; while in the other form, the softening first appears within the scirrhous tumor and progresses outwardly. The external ulceration is observed when the scirrhus has reached to and involves the skin in its growth as well as the subcutaneous adipose and areolar tissues.

As the malignant disease approaches the surface, the skin adheres closely to the portions of the growth that is over it, and becomes dark or turgid with blood, thin, glary, tense, and perhaps changes to a more dusky color, or a pale reddish-brown. This change in the structure and color of the skin does not extend far, neither does it gradually fade out like discoloration produced by inflammation, but is quite circumscribed, with its border but just beyond those parts where the integument adheres to the cancer.

Soon the surface appears raw, or fissured as if the stretch of the skin had cracked it; or the skin may be covered at those points with a thin yellow crust or scab, which on being removed exposes an excoriated surface from which a slight exudation soon induces another similar crust. At this time there is no real *ulcer* present, but after a varying length of time the surface appears as a more positive ulcer, on which crusts no longer form and from which exudes a rather copious thin acrid fluid.

The ulcer once fairly formed it is apt to appear quickly at other points where the scirrhus has approached the surface, and by rapid spreading, and coalescing if there has been more than one, the ulcer rapidly extends, but does not eat deeply into the diseased mass, while its surface appears pale, hard, dry, inactive.

Ulceration does not put a stop to the growth of a cancer, and increased growth leads to the involvement of more skin, which in its turn is softened, and thus the ulcer extends superficially.

There is nothing of a specific character in the ulcer so formed, but as has been stated, on the approach of the tumor the skin becomes thinner, cancerous, excoriated, perhaps fissured, and then softens and disappears.

As the tumor is exposed by the destruction of the integuments, it does not grow rapidly in size or throw out granulations or fungous growths. It is true, granulations may cover the base of the ulcer, but they are pale and hard, and they may scab over, or even be covered with a skin like that covering ordinary cicatrices. If the ulcer becomes deep, it may act very much like an ordinary chronic non-malignant one, and deepen by sloughing or active inflammation.

When, however, the decomposition of the malignant mass begins *within* its substance, the disease assumes a far different appearance and passes through different changes.

The yellowish dull, soft material is *not* pus, but consists mainly of the debris of the cancer in which are also cancer cells. It may have also mingled with it some ill-formed suppurative fluid. This material accumulates and presses upon the walls of the tumor until they give way and the mass is discharged, leaving the tumor a solid cancer with a deeply exavated ulcer. The walls of this cavity continue to soften or ulcerate on their internal surface while their onward growth continues by the continued increase of cancerous matter, and often as the cancer wastes away at its ulcerated part, it is increased outwardly, and while the ulcer is enlarged the cancer is not destroyed. The discharge from the ulcer is not pus, but a thin ichorous fluid which has a peculiar and disagreeable odor, and irritates or corrodes the parts with which it comes in contact. This odor is much more notable in a live cancer than in one which has been removed by amputation.

When not disturbed by treatment, in the latter stages the edge of the ulcer will be raised and everted, and is too rigid or inelastic to stretch, is nodulated and sinuous. The base of the ulcer is hard, knotted, nodulated, and covered with hard, cancerous granulations.

Treatment.—For the cure of this as well as the scirrhous form, almost all forms and kinds of local applications have been made. Extracts of various anodyne and sedative plants, as stramonium, hyosciamus, belladonna, and aconite, combined with various vegetable and mineral caustics, have been in vogue from time to time; but as all or nearly all owe their solvent and caustic powers to the minerals in their composition, it has been customary for those who have made the treatment of cancer a speciality to disguise and falsify the agents used, and endeavor to keep their methods of treatment secret and mysterious.

But on investigation, the secret remedy has been found, almost uniformly, to owe its power of dissolving the cancerous structure to the presence of arsenic, corrosive sublimate, phosphate of iron, or the chloride of zinc. These minerals as has been said, are often combined with extracts of anodyne herbs which seem to render their application less painful then they otherwise would be, and perhaps the extracts may also serve somewhat to remove the cancer.

The extracts of wood-sorrel and of red-clover have been said to be useful, but the evidence in their favor is not entirely reliable. A mixture of tannic acid and morphia with just enough water to form a thick paste, has sometimes been found of value in ulcerated cancers. So also has an extract of oak-bark, wet with vinegar. The actual cautery has often been used, and while the pain caused by its application is very great, it is of but short duration, yet it may produce less pain in the aggregate than most caustics in more common use. Systematic and continuous pressure, to produce absorption of the abnormal growth was quite in vogue a few years since.

These various methods have had their advocates, and to promise the cure of a cancer without the dreaded "*application of the knife*," has so pleased the fancy of the people, that many, more especially the self-styled "*cancer curers*," have been induced by their absurd advertisements and publications, to foster the mistaken prejudice under which the public suffers, and physicians have been constrained to make a trial of some of these measures, even at the risk of the loss of valuable time, and perhaps the lives of their patients.

Among the minerals in use, arsenic and zinc, have been apparently the most successful in exterminating the disease. Arsenic, especially the iodide, as used by A. T. Thomson, T. C. Crane, and Biett, has acquired some reputation; and in other forms it has been used combined with substances making the *vegetable caustics* often employed by empirics. But zinc has apparently been employed far more successfully than arsenic. The chloride of zinc, ever since its introduction into medicine by Dr. Papengurth, of St. Petersburgh, has steadily increased in reputation and extended in use. Dr. Canquoin, of Paris, used it as a caustic and solvent, applied to the surface of cancers, made into a paste with wheat flour and a few drops of water. When he wished to destroy a thick tumor his paste was made of one part of chloride of zinc, half a part of chloride of antimony, and two and a half parts of flour made into a paste with a very small quantity of water. A paste of less power will answer where the tumor is not very hard or very thick. Where the tumor is covered with cuticle or skin, that must be destroyed by some other application first.

Dr. Alexander Ure, of Glasgow, uses anhydrous sulphate of lime instead of wheat flour, to form a caustic paste of the chloride of zinc; and he says this possesses the advantage of absorbing the discharge from the morbid mass, and afterwards giving a firmer consistency to the eschar. Mr. Cock of Guy's Hospital, also prefers the sulphate of lime to wheat flour.

Landolfi, of Naples, a few years since, acquired great notoriety in France, Germany, and other European countries, by the use of an impure chloride of zinc combined with the chlorides of other metals. His formula was:

℞. Chloride of zinc,
Chloride of gold,
Chloride of antimony,
Chloride of bromin, āā.

Equal parts, and make into a paste with flour and a little water. He also gave internally a pill prepared as follows:

℞. Chloride of bromine, gtt. $\frac{1}{10}$.
Ext. Conium, gr. ss.
Pellandrum seed, gr. j. M.

One pill was given each day the first month, and twice each day for two months.

Although at first very popular, this method as practised by Landolfi was reported against by a Committee of the French Acadamy, in 1857. The preparation used by Dr. Fell in London, was the chloride of zinc made into a paste with blood-root in place of flour, as used by Canquoin, and probably is none the better for the substitution.

In America it has been used in combination with blood-root, the root of hydrastis Canadensis, and many other articles, which have been employed for the purpose of disguising the mineral in use, or perhaps in some instances because of the ignorance of the operator. ood-root alone, or perhaps with a little corrosive sublimate was used at least fifty years ago.

Without doubt the chloride of zinc paste has destroyed morbid and even cancerous growths, and its application is judicious and proper in very many cases, but always without any attempt at secrecy or mystery on the part of the practitioner, as any attempt at deception must prove injurious to those who practice it in the end. But while these caustic applications will in time remove malignant growths, most if not all physicians have concluded that excision with the knife in the hands of a skilful surgeon is not only the quickest and least painful but by far the safest method of removing a cancer from the breast as well as from most parts of the body.

Previous to an operation with the knife, the patient's system should be prepared by such a course of diet, regimen, and medicine as shall ensure the highest state of healthful activity that it is capable of attaining under the circumstances. Attention should be paid to the digestive organs, that the appetite be good, and the food well digested. The emunctories, as the kidneys, skin, and bowels should be attended to ; and if possible, the patient's system refreshed by several nights unbroken rest.

As soon as the system is properly prepared, the cancer should be removed ; and while this is being done, the patient may be placed under the anæsthetic influence of chloroform, or the gland may be frozen by the use of a freezing mixture, or the knife acted upon by a galvanic current, or the operation may be performed without resort to any measure to obtund the pains, as the surgeon and patient may elect.

The operation is to be performed as directed by the surgeons, and the entire gland if necessary, and so much of the surrounding and subjacent structures are to be removed as are supposed to be involved in the malignant growth. Even some of the glands in the axillary require removal. After the excision, the wound *must not* be closed or even partially closed by drawing together the integuments. However broad the wound may be, the skin should not be drawn together, but the entire surface must be left exposed to observation until it heals by granulation and cicatrization. When thus treated, the parts may be inspected from day to day to discover any appearance of malignancy in the structures not removed by the knife, and should any of a doubtful character be observed they may be taken away by the scissors, the knife, or by the application of the chloride of zinc paste.

After the cancer has been removed, the wound should be dressed with lint or a soft napkin kept moist with water of sufficiently low temperature to prevent inflammation. The application may be changed often, but always carefully wetted before removal, to cover the surface with moisture and to soften any adhesions or hardenings of the dressing. Even where the solvent paste is applied, that may be covered with pieces of oiled silk or bladder to prevent too great dilution, and out side the water may be applied as if the paste was not in use. This local treatment is to be continued until the parts are perfectly healed.

Previous to the operation, during the process of healing, and for a long time afterward, it often is necessary to administer anodyne in doses very much larger than those required in most diseases.

Sulphate of quinia should never be neglected. It has been found to relieve pain and check the growth of the disease in a great degree. It may be demanded often. Various preparations of iron may be used, but the phosphate and the cyanide have, as a general thing, given the greatest satisfaction. Strychnia, and the extract of St. Ignatius' bean have been found very useful and may be given, if they are indicated. Canabis Indica has been highly extolled in these cases, but its value has not been established beyond doubt.

Of the solvents, gold and its preparations, have proved so entirely satisfactory that they should be used, both to remove any cancerous matter that may be absorbed from a tumor, and to prevent an accumulation in any part of the system which may form the nucleus for another cancer. Prussiate of potassa, bromide of potassa, chlorate of potassa, chloride of bromine, chloride of zinc, permanganate of potassa, and the preparations of manganese, may with safety be used in appropriate quantities, and one or other of them may be used for months and years, and their use persisted in as long as there is any danger of a reappearance of the cancer. But, while the internal and local use of these agents has seemed to remove large and painful cancerous growths, as has been said, the use of the knife should never be unduly delayed.

(From King's forthcoming work, "*Women: Their Diseases and their Treatment.*")

CASE OF POISONING BY PROTOSULPHATE OF IRON.

BY PROF. H. DUSSAUCE.

Cases of poisoning by protosulphate of iron are very rare. There are only two described in Christison's and Taylor's valuable works. A case having fallen under my notice some time since, I am induced to report it, especially the anatomical conditions which have been overlooked in previous descriptions of such cases.

The stomach and intestines of James B———, whose death was supposed to have been occasioned by some irritant poison, were placed in my hands for chemical examination in December 185–, at which time I learned of the physicians having the case in charge, that the deceased was taken suddenly ill, vomiting and purging continually from nine o'clock, A. M., to about the same hour in the evening, when he died.

Before describing the chemical examinations made in the case, I will present a description of the anatomical condition of the stomach and bowels as prepared by my friend Dr. Mc Adams. "The *stomach* being opened presented nothing worthy of remark excepting a trace of arborescent vascularity in the sub-mucous tissue. The *Intestines* presented no unusual appearance externally except in five places, all of which were confined to the jejunum. In each of these, the purplish-red hue of the peritoneal coat was changed to a dirty and opaque white, studded with minute flocculent-appearing brownish spots. The form of each was oval, excepting the second in descending, which had two pointed extremities. Their size was about equal to that of a fifty cent silver coin; some greater, others less. They were all located upon the free border of the intestines, none extending around the entire circumference. The margins of the spots were very distinct, excepting the last. The first impression on seeing the spots was that they were occasioned by folds of the intestines pressing upon the side of the jar in which they were deposited and thus pressing out the blood. Upon examining the peritoneal coat it was evident such was not the case, for each spot was found to be encircled by two distinct rings of different colors. The first was slight and red, while the other was of an ivory whiteness shading off evenly and rather abruptly towards the uniform red of the unaffected parts. The shading not occupying more than one eighth of an inch in width.

"*Internally*, the folds of the mucous membrane (valvulæ conniventes,) were of a uniform, purplish-red color, except in such parts as corresponded with the external spots already described. These were whitish and the shading off gradual, extending to at least a quarter of an inch beyond the external white zones. There was no thickening of the coats of the intestines in any of the spots thus marked; neither did they appear to have lost any of their cohesiveness or firmness. The mucous membrane did not peal off more readily than elsewhere. The contents of the intestines consisted of a thin, reddish brown gelatinous mucus, with no hardened feces; and four perfect tape worms with their heads complete."

From the above facts, Dr. Mc Adams remarks: "I believe that the spots could not have been caused by any mechanical pressure and drying after death; neither do I know of any other post mortem influence capable of producing them. The spots have all the characteristics of extreme vital irritation (without actual corrosion,) in its first stage, where it has been suddenly arrested and stereotyped as it were by death."

An inquest was held on the case, but adjourned to admit of chemical evidence being procured through an examination of the viscera. It is to be regretted that the liver was not removed with the stomach and intestines. I had indeed thought of requesting the disinterment of the body for the purpose of procuring the liver, but finding the sulphate of iron I concluded that was unnecessary.

I first removed the fluids from the stomach and then the contents of the intestines, preserving them in separate vessels, to which I added the washings of the same viscera in distilled water. The fluids thus obtained were heated to ebullition and the coagulum which formed, separated from them. The precipitates were desiccated, and the fluids evaporated to dryness upon an oil bath of 220° F.

I examined these for oxalic acid, oxalates, chlorides of mercury, salts of antimony, lead, baryta, etc., but procured no evidence of either of them being present. But seeing, as I believed, that death was occasioned by an irritant poison, I then tested for zinc, during which I perceived the presence of a salt of iron, and having satisfied myself that an unusual quantity was present in the coagulum and fluids seperated from it, as well as in the tissues of the stomach and intestines, I proceeded to ascertain the quantity of iron so remaining. I say remaining, because the greater portion must have been removed during the severe vomiting and purging which preceded death. It was impossible to extract all of the oxide of iron by simply carbonizing the matter and treating with nitric acid, evaporating and washing. It was essential that the carbon should be entirely removed during calcination before all the iron could be separated. Having to contend with phosphates, which would have caused the determination of the iron as peroxide very tedious and difficult, I treated the calcined residuum with hydrochloric acid, evaporating carefully to a syrupy consistence, adding water and filtering. The filtrate was then reduced to the state of protochloride by means of pure zinc, and the quantity of iron determined by Marquerete's process, (permanganate of potassa,) when the following results were obtained :

Sulphate of iron, (FeO, SO_3) from six and a half ounces of intestines,	1.054 grains.
“ “ “ “ “ from five and a quarter ounces of stomach,	0.324 “
“ “ “ “ “ from portions of stomach and intestines previously treated for other poisons,	1.256 “
“ “ “ “ “ from coagulum procured by boiling fluids from stomach,	0.660 “

Sulphate of iron, (Fe O, SO_3)	from fluid separated from the coagulum, evaporated to dryness and insoluble in alcohol,	0.526	“
“ “ “ “ “	from same as last, but soluble in alcohol,	0.324	“
“ “ “ “ “	from fluids from, and washings of, intestines,	1.519	“
Total sulphate of iron obtained from the stomach and intestines. - - - - - - - -		5.663	grains.

In the several fluids I found an unusual quantity of sulphuric acid, or sulphates.

It is a fact of interest, that although nine days had elapsed between the death of J. B——, and the one following that upon which the viscera were placed in my possession, the patches or spots upon the intestines still preserved an acid reaction, as was shown by the reddening of slips of blue litmus paper when applied to them.

The facts already presented readily show that James B—— died poisoned by protosulphate of iron. The question naturally arose as to whether it was criminal or accidental. Of a jury of six persons, I was the only one in favor of a verdict of “accidental poisoning.” My opinion was based upon the fact that the quantity of protosulphate of iron must have been large to produce death, and that the styptic taste of even a single grain is so unpleasant to one taking it, that its administration without the knowledge of the deceased in sufficient quantity to cause death must have been impossible. I therefore held that the poisoning was slow and accidental. To establish this position as the correct one, it became necessary to enquire into the habits of the deceased. We learned that he had been in the habit of daily taking a considerable quantity of iron, sometimes in the form of carbonate, at others as per-oxide. Of each of these preparations of iron we found parcels in the house lately occupied by him. These facts led to the examination of the samples thus found. Each of these yielded a precipitate of sulphate of baryta when treated with hydrochloric acid and chloride of barium, showing the presence of sulphuric acid, while the yellow prussiate of potassa indicated the presence of iron.

I next called on the apothecary who had been accustomed to furnish the deceased with medicine and procured of him one pound each of his carbonate and per-oxide of iron, which I analyzed with the following results:

From one pound of the "*per-oxide of iron,*" I procured :—

of per-oxide of iron,	5689	grains,
" nitrate " "	100	"
" proto-sulphate " "	656	"
" per-sulphate " "	218	"
" nitrate of ammonia,	230	"
" sulphate "	107	"
	7000	"

From one pound of the "*carbonate of iron,*" I procured :—

of carbonate of iron,	6125	grains,
" proto-sulphate of iron,	450	"
" proto-sulphate of soda,	425	"
	7000	"

These analyses demonstrated that the substances taken by the deceased as carbonate and per-oxide of iron were impure, and that the impurity, proto-sulphate of iron, must have caused his death, slowly and accidentally. And finally that the apothecary alone was to blame, he having sold an impure substance to the patient for remedial purposes. In accordance with these facts the jury rendered their verdict of "accidental poisoning."

ANTERO-POSTERIOR SPINAL CURVATURE.

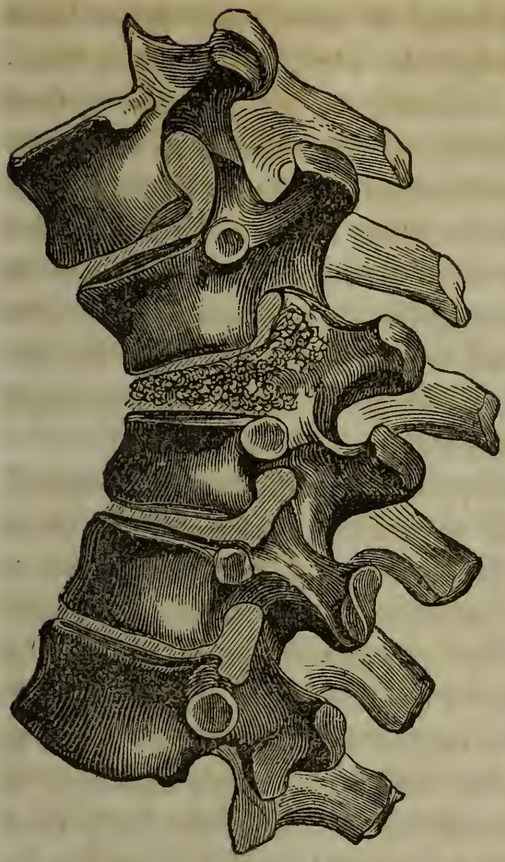
BY PROF. A. J. HOWE.

Two varieties of spinal curvature present themselves, the *angular* and the *lateral ;* and to make the subject of spinal curvature distinctly understood, particular attention must be directed to each variety. In the angular variety there is always destruction of some portion of one or more vertebræ ; and often, for considerable time, progressive disorganization of bone, cartilage and ligaments. The great English surgeon, Percival Pott, called particular attention to this disease, and on that account it is often called "*Pott's disease,*" or "*Pott's curvature of the spine.*" Any part of the vertebral column may be affected with this disease ;—although it is generally seated in the dorsal region, it is not uncommon to see it in the neck, and sometimes it occupies the lumbar region. The deviation is in an antero-posterior direction and produces a lump or tumor, which is made up of projecting processes of the carious vertebræ. It is this peculiarity that has given the disease the popular name of "hump-back."

The cause can generally be traced to an enfeebled state of the constitution which may have been initiated by hereditary taint of a scrofulous or tuberculous origin. In many cases the disease is known to have commenced by deposits of tubercles in the spongy cancellous structure of the bodies of the vertebræ, and between the periosteum and the shell-like wall of the anterior portion of the vertebral bones. These tubercular deposits are not different from those formed in the glands, lungs, and other parts of the body; nor do the softening of the tuberculous mass and the succeeding ulcerative processes differ from the same stages of an identical disease manifested so often in individuals of a scrofulous cachexia.

To fully define the process of tuberculization in a bone or other structure needs a consideration more special in its character than can be entered into in this article. It is, however, proper to say that the degenerated nutritive material, called tubercle, becomes infiltrated into the cancellous structure of bone, and in masses sufficient to produce disintegration and absorption of the normal textures; and the infiltrations being incapable of organization, and removed from the blood, are unable to maintain themselves in the state in which they were produced: hence the process of softening and liquefaction is set up; firstly, by the natural degeneration of the morbid substances; and secondly, by effusions of the liquid products of inflammation, excited during the infiltrating process or by the presence of unassimilated material. A thin puriform fluid is produced, which is often mixed with little fragments of bone. This as a general thing is discharged from the cavity or cavities formed through narrow apertures in the walls of the bone, and finds its way to the surface in the direction of least resistence. It may travel along the anterior vertebral ligament to the origin of the great psoas muscle, thence beneath its sheath to near its insertion, where it may produce an opening externally, constituting what is ordinarily termed "psoas abscess," or finding its way posteriorly from the vertebral substance and along the sacro-lumbalis muscle to a point of exit in the hollow of the loins, creating "lumbar abscess." It will be readily seen that destructive ulcerative disease in the bodies of one or more vertebræ must so weaken their supporting capacity as to render them unable to sustain the super-incumbent weight of the head and shoulders. The middle of the anterior wall of the vertebra where the structure is weakest gives way, and the rims of the articulating surfaces approximate, causing a projection of the spinous processes, by forcing backwards the posterior parts of the bodies of the ulcerated bones.

The progress of tuberculous disease in bone is slow, but sure to



This diagram represents the manner in which angular curvature of the spine takes place,—the body of one of the dorsal vertebræ having been crushed, and wasted by ulcerative disease.

lead to deformity if the liquifying or suppurative stage be reached. In rare cases the tuberculous mass becomes calcified, as tubercles sometimes do in the lungs, and the bone for a short distance around may harden and solidify, a state that is favorable to a cessation of the morbid process. Less rarely the ulcerated surfaces of bone come into contact and then coalesce, uniting by ankylosis in the same way that bony union is affected after ulceration of articular surfaces, or impacted fracture of the neck of the femur.

The beginning of spinal disease is often referred to an injury of the vertebral column, which may have happened from violence directly applied to the back, or from a strain or concussion received by alighting heavily upon the feet. And it is probable that such accidents frequently prove the exciting cause of active inflammatory action in and around the tuberculous mass which from its nature, without the intervention of violence, must sooner or later call forth the same agency.

Thus far the disease that produces angular deformity of the spinal column has been referred to tuberculous deposits in the cancellous structure of the vertebræ, and the succeeding ulceration excited by the infiltrations, yet the disease sometimes manifests itself in the intervertebral fibro-cartilages. A case of this kind is cited by Mr. Stanley, which well illustrates such a condition of the disease: "In the body of a young man, from whose thighs two psoas abscesses had long been discharging, I found no trace of either psoas muscle, the place of each muscle being occupied by the cyst of a large abscess; both abscesses communicated above with a space between the bodies of the third and fourth lumbar vertebræ, resulting from the destruction of the intervening fibro-cartilage; but the adjacent bones and the rest of the fibro-cartilages were perfectly sound.

The disease just described, in many instances, attacks only a single fibro-cartilage; but it often attacks several of them; and there have been instances of its occurrence through the whole series of the fibro-cartilages from the second cervical vertebra to the sacrum. One other circumstance belongs to the history of this disease in the intervertebral fibro-cartilages, namely, that it often gives rise to the formation of psoas abscess. It has certainly done so in many instances which I have examined; in some of them there was a single, and in others a double psoas abscess, the two abscesses communicating with the vacant spaces between the vertebral bodies resulting from the destruction of the fibro-cartilages; and, in many of these, only a single fibro-cartilage had been diseased."—(*Stanley on the Bones.*)

The *Symptoms* attending a diseased spine are marked in its advanced stages, but, at first, they are not at all severe or prominent, and often pass unnoticed. The disease generally begins in young people, yet it may be found in middle life, and sometimes later. The early manifestations of the disordor are lassitude and unwillingness to take the usual exercise. There is a languor and a sedateness in the young patient's countenance unusual to him or one of his age, and he is apt to speak or complain of a weakness in the back, and when standing he leans against something that will take off the weight of the body from the spine. He is able to walk, but does not indulge in running on account of a liability to trip, and the jar that is communicated to the frame by a rapid pace. And as the disease advances and the acuteness of the angle of curvature increases, the crumbling bones will encroach upon the spinal canal, compressing the cord, so that partial or complete paralysis of the parts below will take place.

Pain upon pressure in connection with other symptoms would be diagnostic of spinal disease, yet there have been instances in which several vertebræ have given away under the softening process before any difficulty was discovered or suspected. It is common while examining a patient suspected of having spinal disease, to press upon the spinous processes along the back to discover if there be any tenderness; and in making these examinations we are told to take hold of the projections of each vertebra and twist it from side to side to see if pain can be elicited; but before this be done, the patient should take the recumbent position to relax the spinal muscles, and thus allow of free motion. It has also been proposed to dip a sponge in hot water and pass it down along the spine, it being asserted that the seat of the disease would be indicated by the patient's sensations. More reliance, however, can be placed in this as well as in varieties of spinal disease, upon the sensation elicited by a galvanic current directed through the parts at various points along the column.

By relying upon pain in the back, or that elicited by pressure, one stands in danger of being deceived. Some males, and more particularly females are subject to pain in the back and loins; and if pressure be made along their spines they wince, though there is no disease of the back of any character. It is not uncommon for individuals with difficulties of the genito-urinary organs to complain of pain and tenderness in the back. Only, then, in connection with inability to sit or stand long, and with the evidence of tuberculous infiltrations from the general appearance of the patients, are pain in the back and tenderness along the spinal cord, to be taken as diagnostic symptoms of spinal disease.

As the disease progresses there will be perceived more or less alteration in the relative position of the ribs; the cavity of the chest will be encroached upon, and a consequent difficulty of breathing may be noticed. The heart will suffer in its motions, either from nervous derangement or some change in the normal condition of the circulatory organs. In connection with the symptoms already enumerated a great variety of others may present themselves in the course of the disease. They may be confounded with those which ensue from disorder of the cord itself, or its coverings; functional disorders of the nerves and nervous centres are not unfrequently pronounced organic, and *vice versa*. Too much attention cannot be paid to the position the patient assumes. When standing he leans either upon something that will support the trunk or transfer its weight to the limbs by placeing the hands upon the knees; or when seated he sits doubled with his abdomen resting on his thighs. While walking he manifests weakeness in the lower extremities, and inability to control them with ease and certainty and he is much fatigued with short walks.

If the paralysis be considerable the patient will lose the controlling influence of the rectum and bladder; their contents will be retained for a protracted and injurious period, or voided involuntarily.

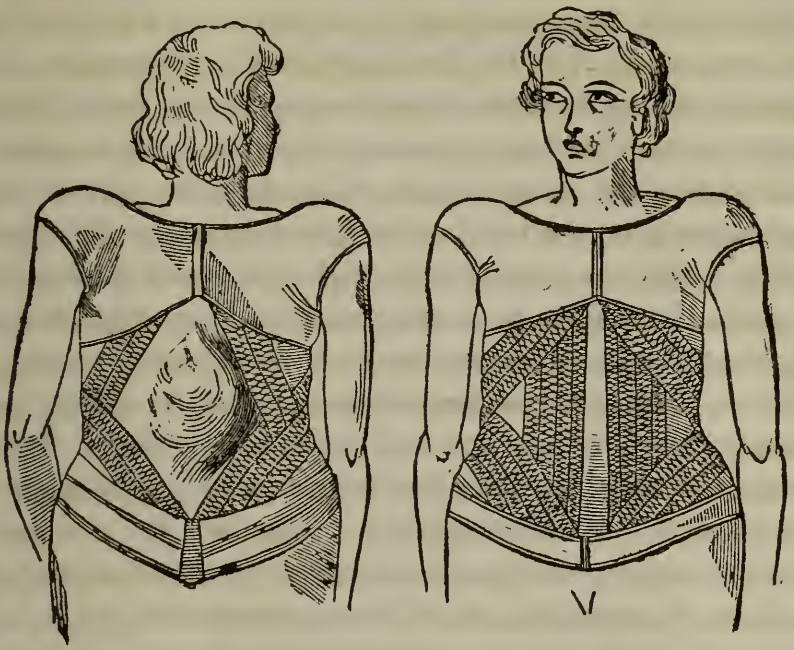
Angular curvature can be distinguished from lateral, or that due to muscular distortion, by the fact that the latter is in compensating curves extending the whole length of the back, and there is *a great wasting of the spinal muscles;* there will also be perceived early in lateral curvature an alteration in the relative height of the shoulders and the hips; and one of the shoulder blades will project farther from the trunk than the other, partly owing to the throracic deformity, but much more to a preternatural relaxation of the scapulary muscles. Angular deformity is an antero posterior deformity, and the angle of projection is commonly acute, so much so that a sharp "hump," stands out from the vertebral column. And the angular variety is more liable to be tender upon pressure than the lateral. Males are subject to the former while the latter is confined almost exclusively to females.

The *prognosis* in angular spinal curvature is in almost all cases unfavorable, the disease being exceedingly slow in its progress, and when not arrested, resulting in serious permanent deformity. When a cure is affected, it is by a fusing together of the diseased bones, a process so tedious that a majority of patients sink from nervous irritation, or exhaustion from the draining effect of the suppuration. It would be hazardous to one's professional reputation to promise a cure under the most favorable circumstances inside of twelve or eighteen months; and many times, even when the difficulty terminates favorably in ankylosis, a number of years are passed before good health is enjoyed by the patient.

The *Treatment* of angular curvature consists in keeping the parts steady or at rest, and removing from them weight and pressure by allowing the patient to assume the horizontal posture, or applying to his body such apparatus as shall fulfil the above indications. In regard to the use of mechanical support in treating the disease in question, I differ with the great body of my professional brethren. It is not a little surprising that surgical teachers recommend to patients afflicted with a similar disease in the knee, and hip-joints, to take much outdoor exercise and fix them up with canes, crutches, carved splints, and other appliances, to support the weakened parts and remove from the diseased structures the weight that is normally thrown upon them; yet when advising treatment for Pott's disease of the spine, the very opposite course is recommended to be pursued.

In the management of children affected with spinal disease, and with whom exercise and fresh air are everything, the little sufferers may have fitted up for them a machine something like a "baby-jumper," or "spine-cart," the weight of the head and shoulders being taken off the column by means of bands passing under the chin and base of the cranium and extending to the supporting apparatus above. In this they are to take exercise several times a day, and when out of it to assume the reclining or horizontal position.

The spinal apparatus usually advised consists of a band to pass around the hips, two lateral upright pieces of iron extending from the girdle to the arm-pits, where they terminate in crutch-like extremities, to support the shoulders and take the weight off the spine, and another belt to surround the thorax, reaching from one crutch to the other both before and behind. Such an apparatus is reported to have rendered good service in some cases, but it is open to many objections. It elevates the shoulders too much, and awkwardly, and allows the spine to sink down between them and resume its curvature.



From the above figures a good idea may be obtained of an apparatus adapted to the successful treatment of Pott's disease of the spine. Springs of flattened wire coils extend from a gutta percha ring moulded to and resting on the pelvis, to a wide collar of the same material, which surrounds the upper part of the chest, and rests on the thorax, as well as against the shoulders.

The vertebral column usually sustains the body uprightly, and the inter-vertebral substances serve as cushions to obviate concussion ; but in Pott's disease the supporting medium has given away and it must be supplied by mechanical compensation until the bony column, through the reparative process, is competent to discharge its normal function. In place of a supporting medium upon the inside it must now be artificially supplied upon the outside of the body.

Vertebra comes from the latin word, *vertere*, to turn, and was applied to the individual pieces of the back-bone on account of the rotary motion given to the vertebral column. To imitate then, the spinal column, the apparatus must possess supporting, rotary, elastic qualities ; and must not interfere essentially with the natural respiratory motions of the chest and abdomen. The hips and other parts of the pelvis are to be taken as *points d'appui*, to which pieces of gutta percha are to be moulded ; and from these flattened coils of steel wire are made to extend to a collar of gutta percha which is moulded to the upper part of the thorax, having ring-like lateral extensions to surround the arms. This collar, like the ring below, is left open in front and behind, but joined as the peculiarities of each case may demand ; and the upper ends of the wire coils are to terminate in the upper gutta percha ring to protect them, and secure other *points d'appui* for the elastic action of the springs. The latter are to extend from points posteriorly on the lower, to points anteriorly on the upper gutta-percha rings, crossing on the sides of the body, above which uncovered spaces are left for the respiratory movements of the ribs. The apparatus should be fitted with care, and lined before it is applied. If necessary, as it would be in most cases, an extra number of coils can be placed straight up and down on the anterior part of the body to resist the tendency of the trunk to incline forwards. The apparatus is to be applied while the patient is in the recumbent posture, and is to be worn until the deformity is overcome, or bony deposits have made the parts firm. Even when two or three vertebræ have crumbled and great distortion has followed, the natural position of the body can with this apparatus be restored; and bridges of new osseous material from one vertebra to another, render the column steady and strong. With an apparatus like the one described the patient can assume the erect position without the pain usually excited by such an attitude, and can take gentle exercise and derive all the advantages of open air, without which rapid improvement and sound health are not to be expected.

Besides the use of mechanical appliances, much benefit may be derived from suitable medication. In tubercular cases such remedies should be used as are commonly employed in the same disease when seated in the lungs, or elsewhere. Among these are cod-liver oil, iodide of potassium, the chalybeates, phosphates, and various tonic and solvent medicines. Many practitioners use in scrofulous cases a syrup containing several articles of the materia medica that are reputed as *alterative*, or gland stimulants, and claim for their peculiar compound, great efficacy in removing tubercular deposits. Such favorites may be used in tuberculous disease of the spine, but not to the neglect of some of the remedies first enumerated.

To the tender tumor or hump, anodynes should be kept constantly applied. A plaster of the extract of belladonna, on which may be sprinkled morphia or aconitina, placed over the diseased point will do more towards arresting the progress of the disease than most are willing to admit. Powerful anodynes may be introduced beneath the skin covering the diseased part to allay the pain, and by benumbing the nerves stay the morbid and destructive processes. Counter-irritation at the distance of four or five inches from the diseased parts may divert the nervous action, and thus prove serviceable.

EDITORIAL DEPARTMENT.

RADICAL CURE OF HERNIA.

The frequency of hernia and the difficulties attending its successful treatment, have always rendered the subject of rupture one of surpassing interest to the profession. In adults only one variety of the disease—reducible inguinal hernia, fortunately the most common kind—seems amenable to a radical cure. Inventors and pretenders however, have come out from time to time with contrivances which they urged upon the people as certain to effect cures. Few of these have ever merited or acquired any but an ephemeral reputation.

The truss is almost invariably resorted to as a *retaining* instrument; and in some cases it will produce a radical cure, especially if the patient be young. But a truss is unpleasant to wear under all circumstances, particularly from the pressure it necessarily produces, and the uncleanliness of anything long worn next the skin. Besides, as was shown by Dr. Jackson in the August number of the College Journal, no truss yet used can be relied on to cure the disease.

Several years ago the Philadelphia Medical Society chose a committee to investigate the curability of hernia, and to report on the construction of instruments, and their modes of action, in the radical cure of the disease. The committee inquired into the merits of Stagner's, Hood's, Eberle's, and Chase's trusses; and after three years of faithful and unremitting labor, examining hundreds of cases treated and under treatment, made a report embracing the following: "That the success in cases of umbilical hernia in young children, is almost general; * * * that success in other varieties of hernia affecting subjects of similar ages, is by no means rare under the operation of trusses with soft pads; that, in children over ten years of age it (*a radical cure*) becomes rather uncommon; that in youths between the age of puberty and twenty years, it (the radical cure) becomes rare, and after the latter period, *very rare.*" Because the committee showed a preference for the instruments of Dr. Chase, he issued a little work on the subject in question, in which he claimed to cure a large share of his cases, and quoted from some parts of the Committee's report as endorsing the opinion that his truss will cure a majority of cases. The words of the committee above quoted are sufficiently distinct upon the subject; and an extensive use of the truss has shown it to be no better than a score of other patterns. Several trusses have been patented since the report of the Philadelphia committee; and among them is one by Marsh, of New York city. For the reliability of the pretensions made for "*Marsh's Radical Cure Truss*," the reader is again referred to the article on "Trusses and their use" by Dr. Jackson.

Operative means for curing hernia date back to a very early period; and some very absurd notions have been entertained in regard to the nature and treatment of the disease. At one time castration was performed as a means of cure, and undoubtedly the inflammatory exudation along the spermatic cord following the operation, would in some instances effect a permanent closure of the inguinal canal; but on account of the great mortality of those operated upon, and the deprivation of procreative power among those who lived, the operation by castration was forbidden by legal enactment, and a heavy penalty imposed upon those who disregarded the edict. In place of castration the operation of closing the inguinal canal by a suture was introduced, and from the fact that it preserved subjects for the service of the State, was called the "Royal stitch." This operation consisted in laying open the sac, excising a portion of it and bringing the edges of the wound together by suture, the healing process affecting the cure. Even two thousand years ago the opening of the sac, and allowing the wound to heal by granulation, was practised by Celsus. Aetius performed a similar operation; but we have nothing definite as to the results of the practice. The plan however advised by Celsus, seems to have found favor with the later surgeons, for we find Pott and Abernethy recommending his method. In 1360 Guy de Chauliac directed that the sac should be laid bare, and a ligature thrown around it, to remain until adhesion followed the strangulation. Gerdy, of Paris, was among the first, if not the first, to plug up the canal with invaginated scrotum, introducting sutures through the scrotum, external wall of the canal, and the integuments of the tissues forced into the breach. The success attending the operation of Gerdy was sufficient to turn the attention of the profession to other means for closing the inguinal canal; M. Bonnet, of Lyons, attempted a similar plan by introducing pins through the sac and integuments, leaving them in place long enough to excite adhesive inflammation. M. Mayor, of Lausanne, carried needles armed with ligatures through the invaginated scrotum and the coverings of the mass, leaving them as inflammatory excitants, instead of tying them over quills as did his predecessor, Gerdy. And Dr. Armsby, of Albany, has slightly modified the operations of MM. Gerdy and Mayor, by applying a truss directly after the insertion of the ligatures. But none of these modifications are preferable to the original plan instituted by Gerdy.

At about the same time, Velpeau of Paris, and Pancoast, of Philadelphia, injected by a subcutaneous puncture the inguinal canal with dilute tinctures of iodine, cantharides, and various other irritants with the hope and expectation that the inflammation excited by the irritating fluid would secure a firm union of the walls of the hernial sac. The evidence afforded by the authors of the process themselves, or that of their followers, is not such as to warrant high anticipations of permanent cures. Although in most cases the agglutination of the walls of the sac is sufficient to retain the viscera of the abdomen for a season, it almost invariably gives way upon subjecting the body to severe exercise. A few practitioners however have seized upon the injecting plan, and making the people believe the plan an original one, have succeeded in reaping an income from their credulity.

In 1838, Prof. Wutzer, of Bonn, used a little instrument for radically curing reducible inguinal hernia which promises greater success than all other plans together. The instrument as used by the inventor with modifications, is figured in this Journal, Vol. II. Number 11; and directions are there given for its use. Some suggestions were then made for modifying the instrument still more, and the instrument makers of this and other places have carried the instrument to quite a high degree of perfection. A silver needle is now used instead of the steel one, and for the reason that it creates sufficient irritation without endangering a slough around it. For those subjects too, whose inguinal canals are very large, clamps according to recent suggestion, may be placed upon the sides of the cylinder to accommodate it to the size of the opening to be filled. And even the cylinders may be made larger, and be perforated for the reception of two or three needles; so that quite a large share of cases that were not fit for the instrument as at first invented, are now amenable to successful treatment. In fact almost all cases now come within the practical workings of Wutzer's instrument. At first it was thought that *direct* inguinal hernia could not be cured by Wutzer's plan, but the experiments and success of different operators have done away with that unfavorable conjecture. This is an item of no small importance when we consider that nearly one half of all the cases of inguinal hernia are of the direct variety; (see tabular statement of 237 cases in Appendix to report of Philadelphia Medical Committee,) or from repeated protrusion, and dilitation of the orifice of the internal ring, or a dragging down of it, the two rings are so nearly opposite each other, as to be as difficult of treatment with a truss as those cases where the bowel first penetrated through the *conjoined* tendon.

There are a few precautions which in using Wutzer's instrument, need to be considered by those unused to the operation, or it will prove a failure in every instance. The finger is to be placed on the scrotum about an inch below the external ring, and the loose integument carried upward and outward along the course of the spermatic cord, and *into* the inguinal canal, so that the tendon of the external oblique muscle can be distinctly felt between this finger as it is carried forwards and backwarks and another finger or the thumb placed on the outside. The cylinder is to take the place of the forefinger in the pouch of invaginated scrotum, and great care must be taken, before the needle is introduced through it, that its extremity is in the canal, and not forward or outside of the tendon, between it and the skin.

After the instrument is removed, it is well to keep a light truss applied for a few months, to flatten down the parts, and prevent a protrusion before the tissues are consolidated as much as they will be. A suspensory bandage may also be worn for a few weeks to prevent the weight of the testicle from dragging too much upon the recently formed adhesions. The truss should not be worn too long, especially if the spring be somewhat stiff and the pad hard, or absorption of the plug will follow, and a consequent relapse of the hernia.

It is difficult to determine how many times the operation with Wutzer's instrument has been performed; but undoubtedly several thousand times; and what is truly pleasing, it is attended with no bad success in the hands of the experienced. According to the statement of Wutzer, Sigmond of Vienna, Rothmund of Munich, and Wells of London, very few cases relapse. When the rings are large, and the canal is short, the danger of relapse is greater; but even in those cases so much good is produced by the operation that almost any truss will retain the viscera and prevent a protrusion. T. Spencer Wells, Esq., while visiting Munich last Autumn, was informed by Prof. Rothmund that he had performed the operation about a thousand times in hospital and private practice, and he was happy to say, without one fatal result. "This," as Mr. Wells well remarks, "is more than almost any one could say of the most trifling operation. No one could expect to do a thousand operations for hare-lip,—to tie a thousand nævi or piles—to remove a thousand small tumors—in fact, to do the most trival surgical operation a thousand times, without some untoward result following, accidentally, in some one case."

According to the testimony of those who have operated oftenest the risk of life is not greater than in minor operations in general. Velpeau has stated that there is danger of wounding the epigastric artery in Wutzer's operation, but as the artery lies beneath or deeper than the inguinal canal, there can be little risk in passing a needle through its walls, if directed outwards as it should be. Erysipelas may attack the parts, as it may those involved in any operation, yet there is nothing in the nature of the operation that predisposes to that malady, especially if the needle be silver. In regard to the danger of recurrence of the disease it may with reason be supposed that the parts in a good cure become firmer after the operation than they were before; and, consequently, less likely to yield than those of an individual previously sound.

Considering that one in every ten of the human race is, or has been afflicted with hernia, and that eighty-eight per cent. of all cases are of the inguinal variety, and consequently susceptible of successful treatment, the good that has arisen, and will arise from this operation, is inestimable; and medical science may with propriety lay claim to having achieved another triumph.

ERRORS IN REGARD TO HYSTERIA.

According to M. Briquet (*Union Medicale*) there are prevalent notions of hysteria not founded on fact. The disease in his opinion is too often attributed to excessive excitement of the uterus and its appendages, or to unsatisfied sexual desires; and writers have invented a fanciful etiology to correspond with such views. Of four or five hundred cases examined it was found that no peculiar external appearance could be considered indicative of the hysterical affection; but it manifested itself in the tall, the short, the medium, the stout, the lean, the dark, the light, the fresh, the pale, and in other varieties of constitution, with about an even ratio. No temperament could be pronounced hysterical. As to *mode of life* it was found that "the common people were the subjects of hysteria in almost a double proportion to the other classes." Of the female patients in the medical and surgical wards of La Charite, one woman in five had hysterical paroxysms, and three out of every eight were the subjects of hysteria.

M M. Farget and Briquet have inquired into the condition of the simple Alsatian peasantry as regards the frequency of the hysterical affection, and of three hundred and twenty four cases of hysteria, one hundred, and sixty eight were town born and bred, and one hundred and fifty-six were from the country—the majority of the latter having in childhood labored in the field. "In the case of forty-two of these country girls their mothers had been hysterical, twenty-nine suffering from paroxysmal attacks." Professor Lebert, of Zurick, ascertained "that hysteria is just as often seen in the poverty stricken cantons of Switzerland, as in the most flourishing ones." It has also been ascertained by comparing cases that ill-treatment and privation during childhood tend to establish the hysterical predisposition.

These observations militate against the preconceived idea that hysteria occurs ofteneest among the wealthy, the luxurious, and the refined. It has been ascertained, furthermore, by examining a great variety of cases, that *continence* is not a common cause of hysteria, but that prostitutes and the incontinent are exceedingly liable to it.

Of eight hundred cases marriage was followed by decided advantage in only twenty-nine instances. Of a large number of cases observed, it was found that uterine diseases have little influence upon the hysterical state, further than other affections might have upon a person predisposed to hysteria. Thousands of cases of genital derangement are daily occuring, which do not produce hysteria, and as has been stated, hysterical affections are almost as frequently occurring without evidence of a morbid uterine complication.

The author before mentioned, (M. Briquet,) attaches most weight to the *moral disposition* or *impressibility* of females as the primary or essential cause of the hysterieal affection. The characteristic of which is commonly "foreshadowed in childhood by great timidity, excessive susceptibility to blame, and a disposition to shed tears easily." He mentions that of four hundred and twenty cases occurring under his observation not more than twenty at the utmost did not manifest it.

COMPLETE ABSENCE OF THE CEREBELLUM.

In the *Rev. Medicale*, (April, 1831,) M. Combette, resident in the Hospital of St. Anthony, reports the case of a girl, Alexandrine Labrasse, who died in her eleventh year; and an autopsy revealed the singular condition of the entire absence of a cerebellum. The girl's father was robust, having a strong constitution, but her mother was weak and sickly, and given to excesses of every kind. The child was represented as being extremely delicate and puny, and as growing slowly. She was five years old before she could stand alone; and never was able to articulate words clearly and intelligibly. At the age of ten she could walk but often fell down. She possessed the use of all her senses, but in a weak state; she eat moderately, and all the functions of nutrition were well performed. She was disposed to lie upon the back, with her head inclined to the left side. With her other infirmities, she died from an attack of stomatitis, complicated with symptoms of enteritis, and an exhausting diarrhœa.

After her death Combette was positively informed that she was addicted to the habit of masturbation. Her sisters also informed him that she was subject to epileptic convulsions.

As the case had been one of considerable interest. Combette, assisted by Magendie, made a careful *post mortem* examination of the body. The cerebrum was found to present its natural conditions, except it seemed comparatively large. In place of the cerebellum there was an unusual amount of serum in a gelatinous membrane, which was attached to the medulla oblongata. The tubercula quadrigemini were entire. The fourth ventricle did not exist, and there was no trace of a pons Varolii. The medulla oblongata was mostly present in form, but appeared a little softened. The spinal cord offered nothing remarkable. Milliary tubercles were deposited in the whole surface of the lungs. The mucous coat of the stomach and intestines showed the effect of the last attack of disease. The liver was larger and paler than ordinary. The calibre of the vagina was large, and the labia bore the appearance of having been frequently irritated. The ovaries and uterus existed, but appeared small. The other organs were in a natural state.

Combette regarded the case as one calculated to excite the particular attention of physicians of the physiological school, and as presenting no less interest for pathologists.

BOOK NOTICES.

Report of a Committee on Dr. Lovejoy's Alleged New Remedies. Published by vote of the Monroe, Co. Medical Society, Rochester N. Y. June 9, 1858.

Dr. Isaac Lovejoy of Monroe Co,. New York, had for some years been engaged in the manufacture of what he termed "*New Chemical Remedies*," and had obtained the certificates of some of his professional neighbors both as regarded their originality, scientific character, and value as therapeutic agents, and published those certificates in a pamphlet addressed to the public and the profession—in which he claimed the proprietorship of an invention and the privilege of keeping the nature and mode of manufacturing his agents a *secret*.

This pamphlet and its author attracted the attention of the County Medical Society which appointed a Committee of investigation of which Dr. W. W. Reid was Chairman, and whose Report is contained in this pamphlet.

Instead of the so called *new chemical remedies* being either new or the results of any chemical knowledge, it was ascertained that the whole matter was a pretentious falsehood. Dr. Lovejoy's Nitro-Muriate of Mercury, or *Red Powder*, is the simple peroxide of mercury. His *White Powder* is a chloride of Antimony. His *oxygen* Drops contain no oxygen, but are simply a very dilute muriatic acid. The *Alkaline Earth*, or *Alkaline Salts*, is a dirty Tartrate of Potassa with an admixture of Carbonate of Potassa. The *Brown Drops* are a solution of sulphur in oil of turpentine. The *Sour Drops* or *Antihemorrhage*, or as Dr. Lovejoy sometimes calls them *The Essence of Life*, is the common muriated Tincture of Iron.

The Committee and the County Society have done a very good thing in their expose of this matter and which may be imitated in other regions of our country to the manifest advantage to humanity and the profession.

We would advise this Monroe County Medical Society to continue the same committee to consider the method of reducing dislocations of the hip-joint by means of manipulation, and the pretentions of the Chairman, Dr. W. W. Reid, to its discovery. And to aid in the investigation would advise them to examine articles on the subject written by Prof. L. C. Dolley of Rochester in this Journal, Prof. A. Jackson Howe, in the December No. (1857) of the COLLEGE JOURNAL, and Prof. F. H. Hamilton in the Buffalo Medical Journal for the past and present year.

Popular Physical Astronomy ; or an Exposition of Remarkable Celestial Phenomena. By DANIEL VAUGHAN. Cincinnati, Truman & Spoffard, 1858.

WITH his usual and characteristic modesty, Prof. Vaughan chooses to have this work go before the public without those prefixes and suffixes to his name to which he is justly entitled, and which some seem to consider their best, if not only title to the favorable attention of their readers.

Dr. Vaughan in this volume considers some of the most important facts in astronomy, and grasps the various and most immense bodies in the universe with his giant intellect, and handles them as easily as the geologist does the pebbles of the brook. Although small and unpretending in form, no one can persue this volume without being conscious that it is one of the greatest the age has produced, and being greatly improved thereby. As it is not in our province to analyze the work, we are reluctantly constrained to pass it by with these brief remarks.

The Family Aquarium, or Aqua Vivarium. A "new pleasure" for the domestic circle; being a familiar and complete instructor upon the construction, fitting up, stocking, and maintanance of the fluvial and marine Aquaria, or river and ocean gardens. By HENRY D. BUTTLER. New York; Dick & Fitzgerald, 1858.

MANY years since Priestly presented the idea of the balance between animal and vegetable life which lies at the base of the formation and management of the Aquarium. Ingelhaus, and more recently Daubery and Ward, suggested a trial of something of the kind; and about 1842, Dr. Johnston by actual trial demonstrated the accuracy of Priestly's views. In 1849 and 1850, Dr. Lankester and Warrington more fully perfected the idea, but the matter was not viewed as of great importance until some seven years since Gosse, instituted a series of experiments which placed the correctness of Dr. Priestly's philosophy beyond doubt or cavil.

Soon the Aquaria of London and Dublin were established on an expensive scale, and the whole of Great Britian becomes interested in them.

In 1856, P. T. Barnum obtained information in regard to there manufacture, as well as persons who were acquainted with their manufacture and management, and one was constructed for the American Museum larger and more complete than had been before made, and opened to the inspection of the public, since when they have been introduced into many public establishments and private houses.

An Aquarium is any holder of water, in which are live vegetables and animals so balanced that the vital process of the one kingdom shall balance those of the other, and *thus render unnecessary any changing or removal of the water*.

It is well known that animals when alive absorb oxygen and throw off carbon in the form of gas. Vegetables throw off oxygen and absorb carbon. What animals need vegetables furnish, and what vegetables require, animals supply, and an aquarium exhibits a very accurate adjustment of the delicate balance, as displayed in the every day existence of the live universe which the good God has created and which He governs with unerring wisdom.

Fishes, reptiles, and insects, to live must consume oxygen, which oxygen is constantly being thrown off by plants when acted upon by light, and is absorbed into the water of the aquarium ; while the carbon necessary for the growth of the plants is in like manner supplied by the animals, thus proving conclusively the accuracy of the opinions advanced by Priestly.

The author of this little book is one of the proprietors of the American Museum, and he has given to the public a very interesting and useful work.

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The Young Mother and Nurse's Oracle for the benefit of the Uninitiated. By Ann H. Allen. Cincinnati. E. Mendenhall, 1858.

The author of this little book enjoys quite a reputation and doubtless well-deserved, as a nurse, and she has reproduced many things young mothers need to know, a want of which knowledge has caused an immensity of suffering.

This work is not always accurate, nor always quite reliable, but we shall be pleased to aid its author in her endeavors, until those who by a thorough medical education are better qualified to instruct shall see fit to write for the people such works as will more perfectly supply the want.

In this book the author has not done herself justice when she has given her own views, and the authors she has chosen to quote from, in our opinion have not been well selected ; but, in future editions these errors can and doubtless will be corrected.

◆

Pathology and Treatment of the Paralysis of Motion. By J. P. Batchelder, M. D. New York.

This is one of the most valuable monographs with which the profession have been favored, and should occupy in a *permanent form*, a prominent place in the library and *mind* of the entire profession, as it will convey ideas which reduced to practice will produce most wonderfully favorable results.

◆

Dysentery : Its Pathology and Treatment. Clinical Lectures delivered at the Jackson Street Hospital. By Robert Campbell, A. M., M. D., Demonstrator of Anatomy in the Medical College of Georgia, and Lecturer on Clinical Medicine at Jackson Street Hospital.

In the three lectures composing this pamphlet the author has given his views of the nature and pathology of Dysentery ; the various modes in use of treating the disease, with a critical examination of the philosophy of this treatment, and the objections thereto ; and what he considers the *rational* indications desirable to be fulfilled, together with the treatment his reason and experience have taught him most adequately fulfils those indications.

It is an admirable and philosophical production, and one worthy careful consideration.

EDITORIAL ABSTRACTS.

Belladonna a Milk arrester.—Repeated experiments have fully proved that the application of the extract of belladonna to the breasts not only allays the pain, and puts a stop to inflammation of the glands, but arrests the secretion of the milk, and has proved of great value as a true *Ischogalactic.*

Carbonic Acid as a local Anæsthetic.—Dr. Churchill has often employed carbonic acid gas as a local anæsthetic in irritation of the bladder, bowels, uterus, etc. The manner of its application was the same as that detailed in the first Volume of the COLLEGE JOURNAL at page 235, and at page seven of the second volume. It has been used particularly as an injection into the vagina.

Alum Injections in Dysentry.—M. Hanon relates more than three hundred cases of epidemic dysentery in which great benefit followed the use of alum injections. The solution is both astringent and antiputrescent.

Anodyne Lotion.—Take of Prussic acid and glycerine, each one fluid drachm, and add one grain of aconitina. This may be applied with a camels hair pencil over parts affected with severe neuralgic pains.

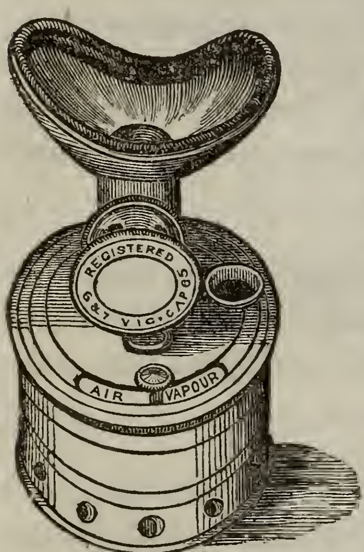
Asclepias incarata in Syphilis and Gonorrhœa.—For some time past the attention of the profession has been directed to the Asclepiadaceæ as possessing valuable therapeutical properties. Among the recent contributions on these plants is a paper by Dr. Hauser of Ga., in which he says for the treatment of gonorrhœa and syphilis he thinks there is nothing known to the profession equal to the asclepias incarnata. He makes a tincture by steeping four ounces of the root in two pints of alcohol, and usually prescribes a tablespoonful three times a day.

MISCELLANY.

"THE VAPORATEUR."

VAPORS are being used at the present time with a variety of therapeutic intentions, and with general satisfactory results. But many physicians hesitate to make use of them to any extent in their practice, from the difficulty they have experienced of determining with even an approximation of any exactitude as to the *dose* or quantity administered at any one time.

From this want of exact knowledge also, it has been found impossible to convey to others the results of any one's experience. To overcome these difficulties, T. P. Sall, Surgical Apparatus Manufacturer, of Birmingham, England, has devised an apparatus, depicted in the cut, which he calls the Vaporateur.



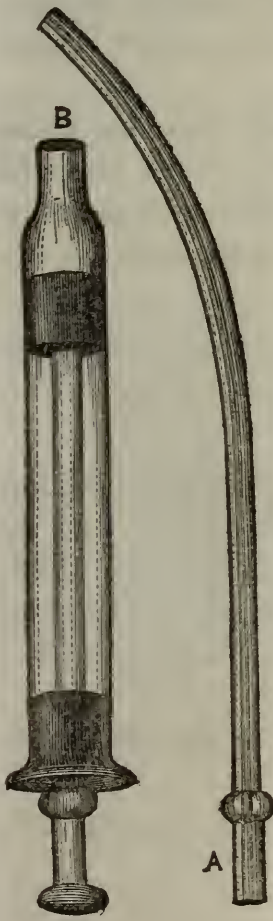
It consists of a cylinder, to the lower end of which is attached a *conical seive*, upon which the sponge rests which contains the fluid from which the vapor is generated, as chloroform, or any other agent. The object of the seive is to allow any fluid not retained by the sponge to pass into a *receiver*, and thus preclude the possibility of its passing into the mouth.

At the lower end of the cylinder there is also a *revolving cap* to close small holes around the bottom of the cylinder. These holes admit the air, which is to be impregnated with the vapor as it passes through the sponge. The top of the cylinder is fitted with a *double plate*, fastened together by a central seive. The under of the two plates has two openings corresponding with the two shown in the cut as belonging to the upper plate. When the lower plate is turned so as to throw the button mid-way of the opening, the position is such as to have the vapor mixed with and diluted with an equal amount of atmosphere. If the plate be changed one way, it will admit less air, and therefore the vapor will be less diluted, or if turned the other way there will be more of the atmosphere admitted, and the vapor being more diluted with air, is of less strength. By noting the amount and the strength of the vapor-generating liquid poured upon the sponge, and the relative position of the plates, the amount and strength of the vapor inhaled can be determined with a good degree of exactitude, for the surrounding cylinder will prevent any from escaping. The instrument has not yet been introduced to any extent in practice.

A NEW INJECTING SYRINGE.

It is desirable, at times, to make use of caustic injections into the urethra and other parts of the system, but for this purpose the ordinary syringes in use are obnoxious to two objections.

Most caustic injections, and even some which do not contain anything of a caustic character, are liable to act upon any metal in common use, as well as to be changed by contact with the metal.



The ordinary short nozzle does not always convey with certainty, the fluid to the part on which it is desired to act.

To remedy these defects, Dr. Acton has had a syringe made of glass, and of the form and construction figured in the cut. It is made thick, that it may not be fragile, and the nozzle (A) can be removed by slipping it out of the barrel (at B) to allow of its being packed in a small case. It is usually made to hold about two or three drachms, but may be made of any desired capacity. The nozzle fits to the barrel by being ground, and there may be several nozzles of different lengths and forms, to fit the syringe for various uses. It is a very convenient instrument, and may be used to administer nasal, tracheal or urethral injections, or to wash out abscesses, sinuses, or fistulas. Any desired fluid may be used without fear of any action or reaction, and the syringe can easily be kept clean.

BEACH'S BLACK, OR HEALING PLASTER.

"Many preparations which have been palmed upon the people as valuable *new* preparations are, on examination, found to be modifications of old and well known combinations; and to those somewhat acquainted with the literature of the profession, most of the claims for originality are amusing for their simplicity or audacity."—(*C. H. Cleaveland*, *College Journal of Medical Science*, *Vol. II. p.* 347.)

That the above remarks are very true in regard to the so-called Black Plaster of Beach, as well as many other preparations he claims to have originated, an examination of the German Pharmacopœias will prove. This plaster is a very old and very popular one in Germany, and is officinal in divers Pharmacopœias. I give the favorite mode of preparing it according to the Prussian Pharmacopœia, under the synonymes of *Emplastrum fuscum*, *s. Emp. noriscum*, *s. Emp. nigrum*, *etc.*

"Boil eight ounces of finely pulverized red lead with sixteen ounces of olive oil, with constant stirring, until the mass is of a dark brown color, then add four ounces of yellow beeswax, two drachms of camphor dissolved in olive oil, and make the plaster of the proper consistency."

I have no doubt Dr. Beach learned this preparation from the same German physician to whom he was indebted for many of the ideas he claimed to have originated with himself; and the addition of the common resin to the original formula, was simply to give color to his claim of originality for this preparation.

Eds. of the College Journal:

Sirs:—Please say to the profession in Indiana, that the Semi-Annual Meeting of the Eclectic Medical Association of Indiana will hold its session in Indianapolis, commencing on the 5th day of October, 1858, at 2 o'clock, P. M. Each member is expected to prepare a report of some case in practice, or read a paper of some kind bearing on the subject of the profession, before the Association.

The second day of the meeting has been set apart for the above purpose. All are cordially invited to attend.

[By Order,] O. H. KENDRICK, *Secretary.*

Indianapolis, August 20th, 1858.

MARRIED.

In Jamaica, West Indies, in June, 1858, Alexander G. McCatty, M. D., to Miss Victoria E. Mason.

At Berlin Center, Ohio, September 2d, 1858, by Rev. T. B. Tait, Dr. J. F. Buck, to Miss Ada L. Davis, daughter of James Davis, Esq., of the former place.

On the 1st of September, M. B. Manser, M. D., of Virginia, to Eva Morris, daughter of James Morris, of Kanawha County, Virginia.

THE

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ORIGINAL CONTRIBUTIONS.

THE HOT SPRINGS OF ARKANSAS.

BY PROF. W. BYRD POWELL, M. D.

In my various peregrinations I have scarcely met with an individual who possesses any correct idea of these wonderful springs or of their therapeutic properties; and as medical gentlemen are frequently consulted by the most hopeless of their patrons with reference to the propriety of their going there, they should be in possession of some reliable information concerning them. Hence, I concluded that a brief essay conveying such information would be acceptable to the readers of the Journal.

All who have seen these springs regard them as a great curiosity. They excite the most wonderful or marvellous conceptions in the minds of those who are least acquainted with science. I do not intend to enter into a mineralogical and geological consideration of all their relations, but only so far as may refer to their medicinal value to the afflicted.

The Springs make their appearance in the grawacke system of rocks, and in a section of country about fifty miles south of the capital of the State. They are surrounded by a great repletion of geological, mineralogical, entomological, botanical and reptilian interest. Springs to the number of sixty or more break forth from the western slope or face of a mountain at various points between its base and an altitude of one hundred and fifty feet.

The average temperature of the water as it escapes from the earth from the tests I made, may be placed at 156 degrees Fahr. It is just the temperature for scalding hogs and chickens, and for this purpose it is very frequently used, and never without entire success. And strange as the fact may seem, animal life is sustained in this water. In the wooden gutters or troughs used for conveying water to the baths, wafted leaves have fallen. In these leaves covered with scalding hot water lives a little white worm about six-eighths of an inch long; its head is of a bright chesnut brown color; its body is white and greatly corrugated; if the rugæ were unfolded, its length would probably be doubled. In one of the small springs on the mountain-side I discovered myriads of small bodies in active motion. My first impression was that they consisted of fine sand thrown into motion by the water, but upon careful watching I found some of them settled on a small forest leaf. I raised it carefully to the focus of a strong pocket lens and discovered it to consist of animalcules, each of a globular figure and having six feet. This was on a hot day in August, yet in less than a minute they were chilled into immobility. Upon my approach to this spring a snake, commonly known as the garter snake, became surprised and in escaping from me slipped into the water and was instantly killed by the heat, yet this water is the abode of millions of animals.

Mineral character of the Water.—It deposits a small percentage of the carbonate of lime, and a much less percentage of the sulphate, and the protoxide of iron to so small an extent that it can barely be detected by a delicate test or reagent. The time has been when the deposit of the corbonate of lime was exceedingly copious—equal I think to that of the Sweet Springs of Va. The mountain side of the creek that passes through the valley, and into which this thermal water is discharged, is curtained by an escarpment twenty feet high of travertine. This travertine furnishes all the lime that is required for architectural purposes in the valley and vicinity. From the temperature of this water I conclude that it deposits as much carbonate of lime now as it ever did, but the deposition now is effected in the interior of the earth, for I have no doubt but this water is heated by a chemical process, and not by the incandescent condition which some exuberant imaginations suppose to exist in the deep or central regions of the earth, a supposition of Mr. Featherstonhaugh, U. S. Geologist.

The only valuable therapeutic property which I can conceive this water to possess is its temperature; and water of the same temperature of course can be had in every family in the land. The peculiar value of the springs consists in the facility with which it can be applied. Some marvellous cures have been effected at these springs, but they have been mostly cases of chronic rheumatism. What effected the cures? Vapor bathing in any other place and with any other water, if as much marvellous interest could be attached to it, would do as much. The cures effected by vapor bathing at these springs have convinced me that vapor bathing is *the* remedy for chronic rheumatism. But candor compels me to say to those of moderate means, stay at home, and pursue vapor bathing as faithfully as it is at these springs, with the use of the same or better adjuvants, as warm teas, etc., and in the end you will do as well.

I have never known constitutional syphilis to be cured by the hot springs, nor by any thing else. But other influences, as exercise of traveling, the mountain air, company, change of diet, etc., often have a beneficial effect upon the mind, and may be thus instrumental of cure in some cases.

The warm springs of Virginia have an agreeable summer bathing temperature. The water has a sweetish taste, and deposits a great quantity of the carbonate of lime which has rendered the valley of these springs one of the greatest curiosities in the United States. The quantity of lime deposited now I think is less than it was at a remotely former period. The play of chemical affinities here is obvious. The lime is held in solution in the form of a bicarbonate, and when forced to the surface an equivalent of carbonic acid is disengaged, though it is retained by the water, by which it acquires a sweetish taste. The lime is left in the form of a simple carbonate, and being greatly insoluable, is deposited. But on passing from a perfectly fluid to a solid state it evolves caloric. This accounts for the heat of this and similar springs. Thus it is to be understood that thermal springs may be produced without the agency of the supposed centrally igneous state of the earth.

In other parts of the globe there are hot springs, all of which are considered by geologists as the result of "igneous" or volcanic causes. Hot springs burst out at great heights from the Pyrenees and Himalaya mountains and they are abundant in the Alps, but they are all reputed as holding in solution large quantities of lime, with carbonic and other gases, the disengagement of which sets free caloric. One of the most striking examples of the rapid precipitation of carbonate of lime from thermal waters, occur in the hill of San Vegnone in Tuscany. So rapid is the deposition near the source that in the bottom of a conduit pipe for carrying water to the baths, a half a foot of solid travertine is formed every year.

On another hill, not many miles from the last mentioned, are the celebrated baths of San Filippo, which get their supplies from warm springs, containing large quantities of carbonate and sulphate of lime and sulphate of magnesia. In a pond near by into which the waters fall, a foot and a half of solid travertin forms every year. The hot springs in the vicinity of Viterbo (celebrated in verse by Dante, in f. xiv. 79), like some of the geysers in Iceland, send forth jets of calcareous water which concretes into conical mounds.

The Seago di Zalfo, a lake between Rome and Tivoli, is saturated with carbonic acid gas, and the water maintains a temperature of eighty degrees Fahr. The bed and shores of this lake are solid banks of travertin, showing that springs charged with carbonaceous waters furnish supplies to the lake.

These and other examples that might be furnished, afford abundant proof that the hot springs of Arkansas, of Virginia, and of foreign districts, are not produced by subterraneous igneous heat, but by chemical changes favorable to the disengagement of coloric. Though the thermal waters flow, as they do in some cases, from a bed of granite, they are nevertheless charged with the carbonate of lime in solution, showing that the sources of the streams are in beds of gypsum or limestone. Although the ignorant ascribe marvellous curative powers to these waters, the scientific declare them useful only as hot baths.

NOTES AND OBSERVATIONS.

BY T. C. MILLER, M. D.

Chloride of Potassa, I think holds a middle position between the nitrate of potassa and muriate of ammonia. In fever and scarlet fever it is far inferior to pure nitrate of soda; but in syphilis, or obstructions in the visceral abdominal organs, as of the liver, or in exanthematic skin affections, prosopalgia, aphthous ulceration of the mouth, stomatitis, aphthæ of children, and salivation from the use of mercury, no other preparation is equal to this.

Gelseminum.—I have had some opportunities to make continued observations on the use of the tincture of Gelseminum in addition to those referred to on page 299 of the present volume of the College Journal, and I have now used the tincture with surprising success in *acute* gonorrhœa, even from the first.

I have treated the disease for years with laurel water, (15 to 20 drops at a dose, six to eight times a day,) as I obtain it imported; but for some time past I have used in place of the laurel water, the tincture of gelseminum in doses of twenty-five drops four times daily. I find it quite as efficient as the laurel water and I think preferable to it. I hope in time to give the Journal an article on Gleet, and also the results of some experiments with the tincture of veratrum viride.

Cimicifuga Racemosa.—In two cases of a chronic cough of a peculiar character, in which I could find no local disease, I gave the tincture of cimicifuga, and what is called cimicifugin, and both cases were improved but not cured. I was obliged to refrain from farther use of the tincture, as it produced violent headache.

I then distilled a *water of cimicifuga* and gave that to both, with great amendment in a few days, and a complete cure in a few weeks of the cough, which had been of four and five years standing. It must be that quite a different principle obtains in the distilled water from that which resides in the tincture or extract.

The action of the water of cimicifuga in those cases led me to make use of it in ophthalmia where the infusion of it had been of no avail. The distilled water cured the ophthalmia completely.

Hydrastis Canadensis.—This produces a marked effect on the liver. I have given it in infusion to a child four weeks old with diarrhœa and night-sweats, with a complete cure. In another case it failed and I gave cascarilla with rhubarb and potassa in infusion.

Nitric Acid.—I have observed in diverse medical journals as well as in the College Journal, nitric acid as having been *first introduced* (! ?) by Dr. Arnold of Montreal, as a remedy for pertussis.

The use of this acid was highly eulogized by Dr. Mc Nelly of Tenn., and by Drs. Gibb and Young.

Muriatic acid had been used in this disease long before nitric acid was recommended by Dr. Arnold, and was highly praised for its value in the catarrhal stage in 1813. Whiel recommended the use of it in a dilute syrup. Kopp repeated the idea in 1830 ; and its value has since been attested to by Hachmann, Barez, Plagg, and others.

Dilute nitric acid produces effects similar to other acids, but causes more disturbance to the digestive organs than muriatic or sulphuric acids. This well-established fact has led to its being seldom used as an internal remedy by European practitioners.

Dilute Muriatic Acid agrees better with the digestive organs than even sulphuric acid, and by combining with organic matters, as protein bodies, or albumen or fibrine, its activity is neutralized, and hence it does not corrode the mucous surface of the stomach, but rather forms, together with the lactic acid of the amylaceous food, the gastric juice or *pepsine*, through which food is digested. This acid produces an agreeable feeling of warmth in the stomach, and also promotes the vermicular motion which assists digestion.

I recently have had fine opportunities to try the therapeutic effects of both these acids, and must state that I consider muriatic acid as far to be preferred before nitric acid. My favorite formula is:

℞. Acid, muriat. dil. fʒvj.
Mucillage, Gum Arabic, f℥jv.
Syrup of Lemons, fʒ ij. M.

and give a teaspoonful every two hours.

It seems to me that the recommendation of nitric acid, is like placing old wine in a new bottle, *badly put up.*

QUACKERY.

BY J. SIMPSON, M. D.

Although this is not entirely a *medical* subject it is not completely disconnected with the *immaculate* profession, and strange as it may appear to the initiated there are quacks even among those who are devoting their time and talents to the relief of suffering humanity. Now the question irresistably forces itself into notice; what is quackery? and who are quacks? It will be readily seen however that an answer to the first question will allow the reader to easily answer the second.

But, reader, do not expect to find in this communication those high sounding phrases, and unmeaning garbles of *Greek*, *Latin*, or *Hebrew* which appear to induce you to imagine the writer to be *smart* above what is written, but being a plain matter of fact man I intend to use only those terms, be they *medical* or otherwise, that I *profess* to understand myself, and if you come to the conclusion that what I have written is not all a fiction, but gives you a correct idea of what may be considered a genuine quack, then you may if you please consider the writer as one who has been regularly initiated into all the most secret tenets of that *honorable* fraternity.

Medical quackery is not confined to those who are *pretending* to practice medicine with no authority but that which a *license* from a *county society*, a *good Samaritan sheet* from a *distinguished professor*, or a patent right from a *steam pump* and *cayenne pepper peddler* gives; by no manner of means, and yet it is the generally received opinion of a majority both in and out of the profession, that quackery is only found here.

I regret to say it, but it is an undeniable fact, that there is a sprinkling of this feature to be seen even among the *regularly educated* physicians. It is no sign when a man rejoices in the possession of a parchment granted him by the faculty of a regularly chartered College that he is not guilty of the most contemptible quackery. Why is this? It is because diploma shops where *money* alone will obtain the desired object, are too numerous and easy of access. It is because a *medical education*, pardon me for the use of that word, where a *pretended* education may be obtained in many instances, at but very little if any expense to the *buyer*, and he values it as lightly as it costs him in dimes. It is because in a large majority of the medical schools in this, or in any other country, the diploma may be bought for money, the only difference between them being somewhat of the character of the new Councilman, who, upon being approached with the usual price of such stations, indignantly resented it, giving the buyer to understand that he was uncorruptible. Upon being confidentially asked why he did not accept, answered, "Do you suppose that I am to be had at the *same* price as these old heads who have already grown rich from the spoils?"

Call a Doctor of this class to your bed side, and he will examine your pulse with an excess of dignity and know no more of your disease when done, than before he saw you. He looks at your tongue and sees it is "badly coated;" you must have a *physic* or a *puke*, and, accordingly, he deals out his calomel and jalap, his podophylin and leptandrin, or his lobelia and cayenne, as the case may be, and in twenty-four hours you have a *delicious* sore mouth, or your intestines are scraped and twisted the whole length to such an extent that the slightest pressure causes intense suffering, or you are totally prostrated and suffering from the most deathly sickness that man ever endured by the *beautiful* action of the detestable lobelia. You suffer on for weeks, perhaps for months, and if the powers of life are sufficient to overballance the devitalizing effect of the medicine, you at last recover, but only a wreck of what you once were. If you unfortunately possess a feeble constitution, Heaven help you, for the *Doctor* wont. This is quackery among the *regularly* educated, and is of the order of the old Indian doctor who "threw all his patients into fits because he was death on fits."

There is another species of quackery practiced among *scientific* men who when called to the sick-bed, feel of the patients *purse* as well as his pulse, and determine by the size of the former the character of the disease. If that is plump and full the disease will be of a serious character, and require a long time to be recovered from, but if the *purse* appear as if it had been mashed by the "tread of an elephant" the obliging M. D., thinks it will not be necessary to call again and leaves the patient to get well. It may be well said of the physician in that case "he hath done a good work."

There is another species of quackery, a description of which I cannot give better than by relating an instance in point, which occurred in this city. An old gentleman, and, by the way, the possessor of a large fortune, was attacked with a fatal disease, as the sequel proved. He was attended for about four weeks by two or three scientific physicians, as much so perhaps as the city afforded, with the effect of a growing better and worse alternately, until at the end of that time upon adding up the two columns it was found there was far more "worse" than "better." He was told he must die. As the desire to remain amid the troubles of earth is strong even in the aged, he concluded to *change* physicians, and accordingly some polite disciples of Hahneman were called in. They while examining the case, seeing that he might live sometime yet, and that his *purse* was long, and there was a fair prospect of a "good bill," and, thinking they should lose no reputation if he did die, *discovered* that the former attendants had made a decided mistake in the diagnosis of the disease, and that instead of being fatal he would *surely* recover. He lingered about three weeks and died. This is contemptible quackery.

Quackery is *popular*, and while this continues it will be in vain to attempt to suppress it. The people expect the physician to cater to their prejudices and deal out the murderous drug every time they *imagine* they are sick.

It is at the present almost impossible for a respectable physician to get business, without resorting more or less to such intrigues. It will not do for him to tell his patient plainly that he or she needs *no medicine*, if he does he loses his patient and his fee, and oftentimes his fee is his bread.

Where is the remedy for this? It lies in the medical profession. Let them insist upon a higher standard as a means of admittance into the ranks, and let them be just to themselves, their patients, and their fellow physicians, and the reform will soon be accomplished.

SCIRRHUS OF THE PYLORUS (?).

BY W. SPENCER CALDWELL, M. D.

Diseased action, by its conformity in certain pathological manifestations, has enabled us to group symptoms in a sufficiently scientific order to form that which approximates to a science of semeiology.

But if we call this science it is certainly an imperfect one; and it is owing to a material deviation from the ordinary manifest symptoms in the above disease, that makes me consider the case I have to report as a somewhat unique one. The first manifestation of the disease was at night. My patient worked all day in the field, had an ordinarily good appetite, felt tolerably well during the day, but often on going to bed at night he would rise and vomit up nearly the entire amount of food taken during the day. There was neither pain nor nausea accompanying these symptoms.

These symptoms gradually increased, until by inanition, about the first of November he became so reduced as to be unable to attend to his ordinary avocation. About this time a physician was called in, who diagnosed the disease indigestion, caused by an inefficient action of the liver. Of course, calomel was the remedy; which failing to give relief in ordinary quantities, was carried to the point of salivation.

Time passed on, and the poor man saw plainly that even under the vigorous treatment of a practitioner wielding the Sampson, calomel, he was every day sinking towards the grave. The vomiting was not now confined to night; but as soon as a certain amount of substance either fluid or solid was taken into the stomach it was immediately thrown off. Such was the dormant state of the stomach that articles of food would be thrown up thirty-six hours after being taken, without any signs of change by digestion.

About the middle of April, 1858, I was called to take charge of the case, being the fourth physician who had been in attendance. I found the man taking Pilula Hydrarg. and some mineral acid. His skin was dry, urine scanty, bowels very costive, pulse slow, irregular and corded, countenance haggard, spirits low, but withal he suffered no pain. The friends of the patient were unable to obtain from the physicians who had been in attendance, what to them seemed a satisfactory diagnosis. Upon making strict inquiry into the hereditary tendencies of the patient, I found that the mother had cancer of the breast; that he had had at one time a something on his lip, which his physician had called cancer, but by using pressure it had disappeared.

Although opposed by all the physicians who had ever seen the patient, I came to the conclusion that his disease was cancer of the stomach. It was urged against me that no cancer of the stomach would have continued so long without manifesting some pain. The patient gradually sunk away until the 30th of May, 1858, when he died.

I procured a post-mortem examination, to which I invited all the physicians who had previously seen him. Upon examination I found the pylorus surrounded by an indurated tumor which obliterated the orifice to within the $\frac{1}{8}$ of an inch. The length of this morbid mass was about three inches. Upon making an incision through this mass it was seen to be composed of hard granulations, each of which appeared to be surrounded by a distinct sack. Intersecting these granules were numerous fibres very perceptible to the naked eye. They formed bands radiating through the mass and seemed very firm and elastic. The entire tumor was scantily supplied with blood vessels.

N. B.—Although Dr. Caldwell has modestly implied a doubt in regard to the correctness of his diagnosis, the post mortem substantiated its accuracy too clearly for any further question upon that point. The absence of pain should not be allowed to militate against the positive proof of actual investigation.—Eds.

CONSUMPTION :—INDIGESTION THE CAUSE OF IT.

BY DR. L. W. MARKHAM.

It is an axiom that healthy blood will preserve the body in a state of health. Blood deficient in any of the elements of nutrition, or rendered impure by the intermixture of materials not susceptible of assimilation must of necessity produce a condition of the body which is departure in a greater or less degree from health.

According to Drs. Chess, Lewis, Latour, Dupasquier, Pereira, De Vittis, Sir James Clark, and others, consumption depends upon deficient and disordered nutrition; and well attested facts in almost every tuberculous case seem to warrant the conclusion that dyspepsia is the prime and almost universal cause of phthisis pulmonalis. Prof. Liebig having directed his attention extensively to animal or physiological chemistry was among the first and most able to demonstrate the true mode of detecting those changes that are early set up in consumptive cases. In the appendix of his work are embodied his views upon this subject.

I am among those who believe that consumption is fully developed in the system long before there is any cough, or other marked symptoms of the nature of the disease. The blood has been getting thin, deficient in red corpuscles, and elaborated nutritive material. There is evidence that the vital forces have been weakened by some secret agency. It is pretty well determined that there are about a hundred and twenty-seven parts to the thousand, of red corpuscles in the healthy blood. But in consumption there is a regular decrease of those until they descend to seventy-two parts in the thousand. With such a state of the more solid portions of the circulating medium, it is not to be supposed that there is a necessary supply of nutriment furnished to the blood itself, or to the dense tissues that rely upon it for support. Hence we see the half developed state of such subjects, the softness of flesh, wrinkling of skin, sallow complexion, sunken eyes, and cold extremities. All the new growths and supplies of waste possess a lower degree of vitality, and when accumulated act as a foreign body and cause of local and constitutional irritation. This non-elaborated material that comes from indigestion and imperfect assimilation, constitutes *tubercle*, whether lodged in the meshes of the lungs, or the intricacies of any other part. Some tissues from their structure and function are more likely to receive the tuberculous deposits than others. In almost every case of tubercles of the lungs, Andral observed them in the mesenteric and bronchial glands.

It is reasonable, then, to suppose that consumption has its origin in the stomach and blood-making organs. If the gastric and bilious secretions fail to elaborate from the food which contains the nutritive elements, such material as is needed to develope the body, and replace its wasting tissues, it must eventually perish. But the half digested food makes *something*. What does it make? I answer, TUBERCLE, which in the end serves to embarrass the vital principle, and directly hastens dissolution of the body. One of the first indications of the occult and insidiously approaching state, is a fetor of the breath. This arises in part from the badly acting stomach, partly from morbid gases sent off from the blood through the lungs, and partly from a diseased condition of the nasal passages. I regard a bad breath as a constant symptom of the consumptive diathesis, though the lungs may show no signs of ulcerative disease for years. If a patient with a bad breath feel weak and faint, though a large quantity of food be taken, there is additional evidence of a positive kind that the case needs medical attention. If these symptoms are allowed to continue it is at the peril of the life of the patient. Attention should be directed to the condition of the stomach and the glandular system. If they need recuperation let them have it. Without well vitalized, nutritious blood the health of the body cannot be maintained, and it would be useless to treat the lungs locally. It will be perceived that I would have the disease recognized and treated before a morbid pulmonary difficulty is perceptible. But if that state has obtained before the nature of the disease becomes manifest, local remedies, such as properly medicated inhalations may stay for a time the progress of *mors*.

TYPHUS PETECHEALIS, (BRAIN FEVFR.)

BY G. E. LAWRENCE, M. D.

Having noticed a reply to an inquiry by some one in the May No. of the Journal, Vol., III., asking information in regard to an epidemic that has been prevalent in this section, and the answer not being satisfactory to me I pen a few lines in regard to it as I had some experience in that disease last spring.

The disease has prevailed to a great extent in Sherburne, Colombus and Smyrna, Chenango Co. We had over forty cases in Smyrna. Some are seized with violent pains in the head, stomach, joints and limbs, and frequently the pain is confined to a single point, often to a single toe or finger, and then runs to the head and causes furious delirium. Others have a violent ague and become numb, with nausea and vomiting, severe pain in the head, soon to be followed with fever, delirium, impairment of hearing and sight, and finally with coma more or less complete, and perhaps convulsions. Most of the cases that I saw had petechial spots upon the surface resembling flea bites. These are characteristic symptoms. Numbers have died within twenty-four and thirty-six hours after the invasion of the disease.

The disease commenced in Sherburne about the fifth of March, and swept off some five or six before the physicians of that town knew what it was or how to treat it. Their treatment was venesection, purging, etc. As they lost every case, they became alarmed. New cases occurred every day, nor did the panic subside until they altered their mode of treatment from the depletive to stimulation. Very few died after they learned the true mode of treatment. About the first of April, the disease commenced its ravages in Smyrna, and out of forty cases we lost but two, and they probably might have been saved if they had been rightly treated in season, for four or five hour's delay will sometimes prove fatal in spite of the best treatment. I believe when taken in season and treated with decision and judgment, few diseases yield with so much certainty to a proper course of medication.

I will briefly state my course of treatment of this pestilence. The indications of cure are—to recall the blood from the internal parts to the surface, promoting perspiration by giving stimulants, and tonics, with rubefacients, and artificial warmth externally. The sweating should be kept up for twenty-four or forty-eight hours according to the severity of the case, then let it moderately subside. If there is severe pain in the head with or without delirium, give opium or extract of hops sufficient to relieve, and produce sleep and rest. Flannel cloths wet with a warm infusion of hops were applied to the head, as cold applications were sure to increase the delirium and cause congestion. Support the sinking powers of life with tonics, such as quinine, salicine, hydrastine, and brandy and wine if necessary. I know many of these remedies are contraindicated in inflammation of the brain and its membranes, but every thing which might tend to waste the vital powers should be avoided.

CANCER OF THE BREAST.

BY PROF. CLEAVELAND.

IN considering this disease, in addition to the subjects spoken of in the October number of the COLLEGE JOURNAL, it is well to call the attention of the profession to several other matters, and among them are the

Diagnostic signs of cancer. As many forms of disease of the breast have been pronounced cancer and have been treated as such, which have no claim to that appellation, it may be well to give the diagnostic signs in a brief manner, that those who are called upon may pronounce with certainty, whether the disease is of a malignant character or otherwise.

Diagnosis in this disease is not always easy or certain, and doubtless many breasts have been sacrificed, and much suffering endured, because unprincipled persons have chosen to mislead for the credit of curing a cancer when none has existed. The numerous cases of deception of the latter character, render an ability to determine the nature of the disease of great value both to humanity and the physician ; and many have supposed that by the aid of the microscope, the true nature of the suspected growth could always be determined with certainty. Of late years, however, the most astute microscopists have admitted the fallacy of microscopical investigation ; and as that instrument cannot well be used in many cases to determine the nature of the tumor when the surgeon is first called upon to treat it, a resume of other diagnostic signs is the more desirable.

Cartilaginous, *fibrous*, or *fibro-cartilaginous* tumors, may be mistaken for cancer, and sometimes are distinguished from scirrhus with difficulty, as they are hard, indolent, and sometimes knobbed. The *age* of the patient may aid in the diagnosis, as well as the character of the pain, if any be present. So also, *treatment* may assist, and *time* may fully determine the matter.

Encysted tumors occur, but usually unattended with any pain, and as the tumor is *not* hard, mobile, or circumscribed, and the general health is usually unaffected, except when the tumor becomes unusually arge, the diagnosis is not difficult, except in the earlier stages.

Simple induration, is as much more common than hydatid or encysted tumors as they are of more frequent occurrence than hard tumors. These are a somewhat frequent accompaniment of disturbed menstruation, and occur quite early in life. Sir Charles Bell saw as many females from the age of sixteen to that of thirty-five, at the hospitals, with lumps in their breasts, as he saw later in life with true cancers ; and he said he could trace both forms of disease to "irregular uterine action." This is the disease which Cooper calls "irritable tumor of the breast."

It is distinguishable from scirrhus by occurring earlier in life, as a usual thing, but it sometimes makes its appearance at the cessation of the menses, when of course age does not aid in the diagnosis. But when the disease occurs earlier in life, the age becomes a negative fact to aid in settling the question. Unlike scirrhus, it is tender, and painful to the touch, is often slightly inflamed, and usually yields readily. after correction of the uterine derangement, to local applications.

In this class of derangements of the breast may also be included hardenings caused by the pressure of the dress, external injury, or carelessness in handling those organs, and the distinctive diagnostic symptoms are the same.

Scrofulous swellings sometimes have been mistaken for scirrhus, but the nature of the case will be sufficiently manifest to all enlightened practitioners, and an error in diagnosis in those cases must be the result of unjustifiable ignorance of the profession, or a more culpable endeavor to deceive.

The simple chronic tumor of Cooper, or *Pancreatic tumor*, as it has been styled by others, seldom attacks young persons, first appearing on those over thirty years of age. It is quite superficial, appearing as if one or more lobes of the gland were swollen, is not as hard as scirrhus, is extremely moveable, usually painless, and grows very slowly, and is not nodulated nor tuberculous.

Fungus hæmatodes, or, as it is frequently called, *Vascular Cancer*, is fatal in its tendency, and should be treated as has been directed in regard to cancer. This form of disease, unlike true cancer, may occur at all ages; is never hard like true scirrhus, and as it grows in size it becomes softer, yields to the pressure of the fingers; after a few months gives a livid appearance to the skin, with a distinct fluctuation of the fluid within the cyst, and which fluctuation may mislead, and even cause the surgeon to suppose the tumor a simple abscess, and perhaps to lay it open, to the great danger of the patient; there will likewise be a great enlargement, or even a varicose condition of the veins, with a constantly increasing darkness of the skin, until it ruptures, when there is a discharge of a dark bile-like fluid, having a disagreeable nauseating odor.

This form of disease is softer than scirrhus, is more gradual in its growth, is not accompanied with darting pains, puckering of the skin, retraction of the nipple, or by early impairment of the general health.

Among other diseases of the breast, which have been mistaken for cancer of that gland, are what are called *Glandular Proliferous Cysts*, of the nature of those found in the thyroid gland, where, however, they seldom cause other uneasiness or derangement than those resulting from their size and consequent pressure upon important subjacent organs or tissues. As these proliferous cysts are often mistaken for fungus hæmatodes, and even for scirrhus, it is thought best to describe them somewhat minutely.

In the mammæ, such cysts may be formed by the dilitation of points, or brief spaces of ducts and vessels, but much more frequently from a morbid growth or transformation of the structure of the gland substance. They are usually globular or ovoid in shape, but the shape is liable to be changed by compression. Their walls are formed by fibrous tissue, and are well supplied with blood-vessels, but not with nerves. The walls are closely adherent to the adjacent structure, and are apt, when diseased, to become œdematous, soft, or almost gelatinous.

These cysts sometimes increase to an enormous size, and may contain almost any variety of serous or bloody fluid. Liston removed one weighing even twelve pounds, and Dr. Warren, one weighing thirteen pounds.

Although these tumors always commence as cysts or hollow bodies, there may be a growth, like granulations or proud flesh, springing from their internal walls, which, by its increase, partially or wholly fills up the cavity; or it may burst the cyst and protrude into the adjacent tissues, or even through the skin, and constantly be reproduced when cut away; and in the latter condition be mistaken for what is called a *Rose cancer*, and treated as such.

These cystic tumors at first are painless, and quite slow in their growth for a few years, but afterwards are quite rapid in their increase, much more so than the developement of most cancerous tumors. The character that a tumor assumes, and the appearance it presents, when there is a growth within a cyst, or which has filled it and burst its walls, varies greatly, not only at its various stages of growth, but also apparently from its origin, and thus through all the stages of its progressive enlargement.

In their earlier existence, they may appear low, or deeply seated, with a broad base, with convex layers, like coarse granulations, globular, lobed, in nodes, or nodulated masses, in form resembling a cauliflower, and with a narrow base, or pedunculated, in layers, like leaves, variously branched and interlaced.

The structure of these growths is as varying as their form and appearance. They may be opaque, yellow, soft, yet elastic and somewhat tough; or vascular, spongy, fleshy, and like ordinary granulations; like the vitreous humor of the eye, or gelatinous, and secreting a fluid resembling the synovia of the joints; or firm, compact, and closely resembling the gland of the mammæ, These various forms and structures may be of nearly all shades of color, from yellow, through pink and grey, to purple. They may be found just springing from the wall of the cyst, or filling any part of it, or protruding through its walls into the surrounding tissues, or even through the integuments.

In regard to their minute structures, as revealed by the microscope, they are lobed, or tubular; and these lobes or tubules are lined or filled with nucleated cells, like the excreting glands and surfaces.

They change the form and size of the mammæ, and that change will be as various as the varying form or size of the morbid growth will produce, from a scarcely observable derangment of size or outline to those of great dimensions.

Altough these encysted tumors of the breast, and even the growths which spring from the walls of the cysts, are by the best pathologists considered to be *non-malignant*, yet they are very apt in some cases to recur again after removal, even when the utmost vestige of the morbid growth has been destroyed. Hence the care that must be exercised in pronouncing an opinion of the results to be hoped from any mode of extirpation. This tendency to a recurrence has sometimes been received as an evidence of malignancy, or, that the disease was *cancer*; but many instances are on record tending to prove that this disposition to reappear is much greater in cases of proliferous cystic tumors than in cases of well developed cancerous disease.

But while the more reliable observers and the more able pathologists agree in the opinion that these proliferic cystic tumers are *not* cancerous in their nature, they also have observed that genuine cancer sometimes imitates these tumors in its mode of growth and development. Cancerous tumors have been found in cysts, both in those which are non-malignant and in cysts *produced within cancers*, as in ovarian cysts, and in medullary cancerous tumors of the testicles.

These cysts should be extirpated by the same treatment advised in regard to cancer, but without subjecting the patient to the long-continued after-treatment, necessary in all cases of true cancer.

There are other diseases of the breast which have been mistaken for cancer of that organ , however, none but those who have never investigated the matter thoroughly are liable to the error named.

But as some have misled their patients, even where there is reason to suppose the pretender *could not* be so ignorant as to be himself mistaken, a recapitulation, in a brief form, of the diagnostic and pathognomonic symptoms of this disease may not be out of place.

Pathognomonic Symptoms of Cancer of the Breast. Hardness. The peculiar hardness of the tumor will serve to distinguish the disease from all others except fibrous and cartilaginous tumors, and perhaps, some forms of induration; but other signs will determine the matter.

Insensibility on pressure. However painful a cancerous breast may be, pressure, steadily and uniformly applied, does not increase the pain in any considerable degree. Indeed, as has been stated, steady and systematic pressure has been tried to produce absorption and thus cure cancer. Other forms of tumors of the breast, as induration, rheumatic swelling, abscess, phlegmon, etc., are all painful on pressure, and hence the absence of pain on pressure is a valuble pathognomonic symptom of the disease.

Weight. The actual as well as the apparent weight of a cancerous tumor of the breast, is greater than that of any other tumor of the organ except those of a fibrous or a cartilaginous character.

Surface. In nearly all instances the surface of a scirrhus is knobbed, and of a very irregular outline. It is true, in some instances fibrous and cartilaginous tumors have presented inequalities of surface, but seldom of a character to lead an experienced person astray.

Impressibility to ordinary modes of treatment. Most if not all chronic indurations and tumors of the breast, with the exception of fibrous tumors, cartilaginous tumors, fungoid tumors, and pancreatic tumors, are amenable to the action of disolvent and anti-inflammatory applications, and hence their use is very valuable in determining the nature of the difficulty.

Pain of a darting or lancinating character. This is so good a pathognomonic symptom of cancer, that many have been lead to give the name to neuralgic and other pains not partaking of these characteristics. In referring to the character of the pain, however, the physician must guard against any error which the fear or anxiety of the patient may lead her to fall into. Perhaps no disease of the breast except cancer, and occasionally a tumor of the hepatic kind, ever causes a pain of the true lancinating character.

Puckering of the skin, if distinct and positive, and when there has not been an abscess, is a pathognomonic sign of value.

Apparent retraction of the nipple, is also often present in cancer, and not in any other from of disease.

Involvement of the adjacent structures, while they are still painless to the touch. Most diseases of the breast simulating cancer do not appear to coalesce with the skin or the subjacent muscles ; but cancer always does, not being surrounded by any investing membrane.

The peculiar appearance or color of the skin. No other tumor of the breast except those of a fungoid character, give to the skin over the tumor the peculiar violet or bluish tinge present in scirrhus.

Swelling of the axillary glands. In some rare cases of simple induration of the mammary glands, those of the axilla become affected. This complication is quite common in cancer.

In addition, the *age* of the patient, the *history* of the disease, presence or absence of *hereditary* predisposition, with a proper reference to the diagnostic sign given, must enable most surgeons to pronounce with confidence and safety as to the presence of cancer while yet it is in the scirrhus form.

After ulceration has occurred many of these diagnostic and pathognomonic symptoms may be present. But those absent have their place supplied by the peculiar, hard, and perhaps luxuriant growth of granulations; by the secretion of the ulcer, which is never a healthy pus, and always evolves a peculiar and offensive odor known as the *cancer* odor; by the peculiar form of the sloughings and excavation; by the edges of the ulcer being everted; by the absorbent glands being more and more affected; by the action of applications; and by the past history of the disease.

The ability to be able to determine the nature of a disease of the breast, whether in the earlier or later stages, is obviously of great value to a surgeon. But while so many professed *cancer curers* base their reputation mainly, if not entirely, on a misapprehension of the cases brought under their treatment, calling simple non-malignant affections, *cancers*, and charging enormous prices for their cure; thus subjecting females to intense and long-protracted sufferings, and in many instances to the loss of their breasts, or even their lives; the ability of the people to judge of the nature of these diseases, is of scarcely less importance than for the profession to do so, and hence the special value of this recapitulation of the diagnostic and pathognomonic signs of cancer of the breast.

Appearances of Cancer of the Breast after Excision. Sometimes there is a doubt in the minds of physicians and patients in regard to the true nature of a disease of the breast, even after excision.

Scirrhus of the breast, when somewhat indolent, on extirpation, is of a globular or ovid shape, knobbed, and adherent to surrounding tissues. It may be seated in the gland, or any other part of the breast. On being cut into slices it is seen to be formed of a greyish, or bluish-white substance, and of a consistence between lard and cartilage. In the tumor intermixed with the true scirrhus tissue may be observed the structure of the gland, the areolar tissue, blood-vessels, or ducts, unchanged; or they may be more or less degenerated and transformed into cancer tissue.

Painful scirrhus, or when the the disease has made more progress, after extirpation has the same general appearance, but is softer and the natural structures are more changed. A creamy or whey-like liquid may be pressed out in large drops. Some part of the tumor is soft. By increase of growth it has reached and become adherent to the skin, and probably to the subjacent pectoral muscle. The surface is more markedly knobbed and irregular.

Carcinoma, or ulcerated cancer, when extirpated, evolves the peculiar *cancer odor*, but less powerfully than the same ulcer did before extirpation. The general appearance of the cancerous mass is similar to that already described, but usually the disease has extended so to as involve more of the neighboring tissues, as skin, areolar tissues, muscles, vessels, and even bones.

Appearance under the Microscope. Cancerous masses are composed of four elements in addition to the blood-vessels and the natural structures they involve:

1. A homogeneous substance, which serves as a matrix.
2. Fibrous structures, resembling healthy white fibrous tissue in appearance.
3. A vast variety of *cells*, some of which have been supposed to be peculiar to cancer, and hence have been denominated, "cancer cells," with their nuclei and nucleoli.
4. A peculiar cream-like, or whey-like fluid already mentioned and called "cancer juice."

These elements vary in proportions in the various forms of cancer. In scirrhus, the homogeneous matter and fibres are abundant. In what is known as "colloid," there is a preponderance of a peculiar gelatinous fluid. In the "encephaloid" variety, the cancer is composed mainly of cells. These three forms of cancer are often found combined in the same mass. In the "melanotic" variety, pigment cells are commingled with the cancer mass.

It should be distinctly understood that neither the homogeneous substance, nor the fibrous matter, is peculiar to cancer. The fluid called "cancer juice," and the "cancer cells," may perhaps be considered peculiar to cancer, but they are not always present. The cancer juice is often absent.

Dr. Donaldson has described the cancer *nuclei*, whether enclosed within a cell or free, as round or ovoid in shape, with a length of from 1-2500 to 1-1650 of an inch. In width they measure from 1-3325 to 1-2500 of an inch. In cancer cells, the nucleus varies greatly in size and in its locality within the enclosing cell, and often there are observed two or more within the same cell.

The *nucleoli* are peculiarly bright in appearance, of a yellowish tinge, and average about 1-12500 of an inch in diameter. To see these nucleoli clearly and observe their characteristics, a *fresh* specimen of cancer must be submitted to the microscopic examination.

The *cancer cells* are of various forms, and Dr. Donaldson has named some of the varieties as the caudated, polygonal, fusiform, concentric, agglomerated, and compound, or mother-cell.

These various substances should be well understood, and the examiner well conversant with the use of the microscope, or error may arise.

The *fusiform corpuscles of plastic tissue*, may be readily mistaken for the fusiform cancer cell; but they are much larger than the similar cancer cells, being from 1-775 to 1-450 of an inch in length. *Fibro-plastic cells* are polygonal or ovoid in shape, and vary from 1-5000 to 1-1650 of an inch in length, but their free nuclei are very much smaller than those of cancer cells. Mr. Bennett thinks that the cells escaping from enchondromatous tumors while they are softening, may be mistaken for cancer cells.

Much has been said of late in regard to the value of the microscope in determining the character of a tumor supposed to be cancerous, some supposing the microscope to be of *no value* in the diagnosis of cancer, while others have contended that its revelations are the only ones on which reliance should be placed. Whatever may be the final decision of this question in regard to fully developed cancer, it must be apparent, that, in the earlier stages of the malignant growth, when the cancer, cells do not present their peculiar characteristics and are closely allied in appearance to fibro-plastic and other cells, it must be impossible to determine the matter by the microscope.

Cancer may exist, but the peculiar cell may be present in such small numbers as not to fall under the field of the microscope, and a negative conclusion may be arrived at; and hence a reliance on the instrument in such cases must lead astray.

In cases of well-developed cancer, where the cells are fully formed and plentiful, the microscope in the hands of one expert in its use and in the examination of these morbid growths, is entirely reliable, and will prove of great value in enabling the observer to see what is not visible to the naked eye, and in measuring very minute objects. But the sight alone, even when aided by the best instruments and the experience of thorough training, must never, unassisted by all the aids furnished from other sources, be relied on in the diagnosis of this disease.

MILK SICKNESS.

BY T. C. MILLER, M. D.

The investigation of this singular form of disease has ever been of peculiar interest to me. I am satisfied it has a mineral origin, but of the *kind* of mineral I am not fully satisfied. The poison appears to be different in different localities, but yet of mineral origin, and produces similar effects.

I have applied the tests for poisons of the springs and streams of the infected localities, according to the directions of Berzelius, Liebig, and Buchner, but yet without any positive results.

It is a well established fact, that animals kept within their enclosure until late in the forenoon and the dew is fairly exhaled, and are driven home again early in the evening, will escape the disease.

I have examined the most dangerous localities before the dew was dissipated and I unformly found on the leaves of the plants, rocks, and other places, a greenish-bluish fluid, in drops; but with my unassisted eyes these drops would not be discovered, and only when I used lenses could I discriminate them. I applied some of those drops to my tongue and found the fluid to possess a peculiar acrid disagreeable taste, different from that of any other fluid.

Chemically this fluid somewhat resembles an arsenical copper oxydate. When preserved a day or two the fluid has still a peculiar sickening taste, and produces a singular feeling over the entire system. On repeated trials I found it always produced constipation of the bowels.

In some localities it affects the animals slowly like a chronic disease; but sometimes it attacks them with great violence and proves rapidly fatal. When an animal is affected slowly it usually causes death, but gradually, and after a longer period.

It is established that the cultivation of the soil in these localities deprives them of these poisonous qualities. Yet if the land be put in grass, after two or three years animals pastured on it will have the disease.

In localities where this disease prevails, it usually appears after a hot summer, and early in autumn. During a wet summer and autumn it is seldom manifested.

I have had no experience in the treatment of the disease, and pen these remarks mainly to induce others to examine affected localities closely with a good microscope, and to test carefully all apparent discoveries.

VALUE OF ELECTRICITY IN CHECKING UTERINE HEMORRHAGE.

BY T. F. RUMBOLD, M. D.

On the night of the 16th of February, I was called to see Mrs. M. When I arrived she informed me that she fell down the cellar through a trap door the day previous, and hurt her left side which caused an abortion. The fœtus had come away about fifteen minutes previously, and in half an hour the placenta also came away. I remained half an hour longer, and as the uterus was contracted sufficiently to prevent hemorrhage I concluded to leave. At 4 o'clock in the morning her husband came, saying that his wife was, and had been, flowing for two hours. I took the Electro-Magnetic machine with me. She had fainted three times before I arrived. I immediately applied the poles of the battery with a moderate charge to the right and left sides, changing them around the body to the pubis and sacrum. This caused the uterus to contract and put a check to the hemorrhage. This application of the electricity also had the tendency to keep her from fainting. I left the machine, telling Mr. W———, how to apply it. The next morning she was better but very weak and pale, having bled so much that I could not feel the pulse at the wrist. I called again on Thursday and found her improving.

I am satisfied that no astringent medicine or mechanical means except electricity, could have saved her life, for she had taken two drachms and a half of the following preparation :

℞. Calcined Deer's horn,
Com. powd. Ipecac. and Opium,
Capsicum, āā. equal parts.

Had used cold water bandages and cold water vaginal injections, also a vaginal injection made of an infusion of equal parts of powdered geranium and tannic acid, which I had never known to fail previous to that time.

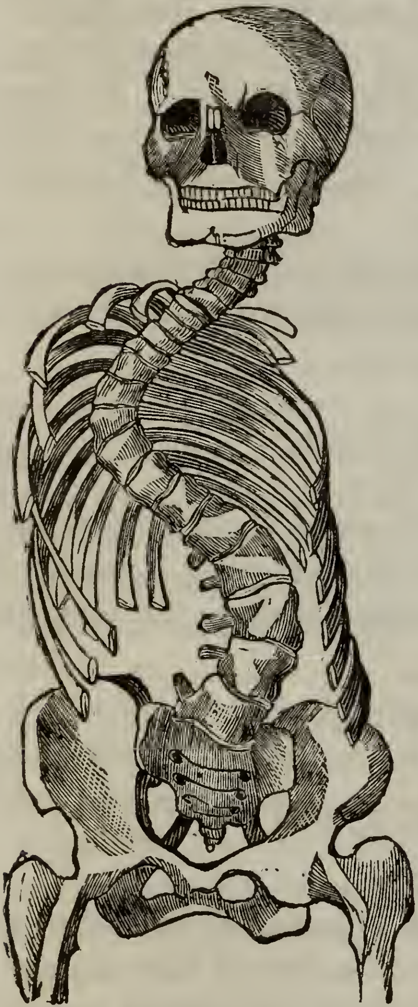
CURVATURE OF THE SPINE.

BY PROF. A. J. HOWE.

In the October Number of this Journal I presented an article on "*Antero-posterior curvature of the spine*," a disease that is characterized by ulceration, disintegration, and collapse, of one or more of the components of the vertebral column. Another variety of spinal curvature is that in which the deviation takes place without loss of structure, and is in compensating curves right and left from a perpendicular, and is, consequently, denominated *lateral*.

It is an affection of a passive kind, occurring during the periods of active growth, and is devoid of pain, or disorganization. The curves are gentle and symmetrical, and for sometime so slight as not to be noticed. An awkwardness in the figure and movements of the patient may be the first symptoms that attract attention. On a close examination of the spine a curve is perceived on one side or the other, and the shoulders begin to lose their normal position; one is unduly elevated, and the other correspondingly depressed, and they are twisted on the convexity of the ribs.

The primary curve commonly occurs in the dorsal region, and deviates to the right, while the secondary or compensating curves are in the cervical and lumbar regions, and deviate to the left. All the curves give the vertebral column somewhat the appearance of the italic *S*.



This diagram represents the deviations that take place in an ordinary case of lateral curvature of the spine. (From a dried preparation in the College Museum.)

In connection with the dorsal deviation there will always be some distortion of the ribs and the sternum, constituting malformation of the thorax. The sternum, especially its lower end, swerves to the left, or opposite to the direction or convexity of the dorsal curvature. The side of the thorax corresponding with the last mentioned curve, sinks lower than the other, approaching the pelvis; and when there is considerable spinal deviation, the false ribs reach the illium and even project into the iliac fossa of that side.

In some instances the sternum and the sternal extremities of the ribs project, presenting the "chicken-breast;" in other cases the sternum becomes depressed, or furrowed with a deep groove when the antero-posterior diameter of the chest will be very short. The cavity of the thorax in such cases is unequally divided, the ribs being closely packed on the concave side, affording less room than will exist in the opposite side.

Various influences have been assigned as the causes of lateral curvatures. By many physicians, muscular weakness is considered the principle cause of the distortion, and yielding of the ligaments and intervertebral cartilages is supposed to take place from want of proper support on the part of the muscular system. Be this as it may, the complaint can generally be traced to a debilitated condition of the vital forces, and may be complicated with a *rickety* condition of the whole skeleton.

Curvature in connection with rickets occurs at an early period of life and affects equally both sexes, there being also distortion and defective growth of the pelvis and lower limbs. But uncomplicated with rickets, lateral curvature is confined almost exclusively to females. It appears between the tenth and sixteenth years, an age beyond that which is most liable to rickets.

Spinal curvature is often brought on by the relaxing influences of luxurious living. Want of out-door exercise, and improper dress contribute not a little to the initiation of the complaint. This may be inferred from the mere fact that females are most subject to the disease.

So far as the original life-force is concerned, both sexes are brought into the world with equal chances of reaching mature and perfect developement; but before the age of twenty a majority of females raised in fashionable society are subject to influences which fasten upon them a greater or less spinal deviation. In communities where both sexes are allowed the same amount of out-door exercise, females have as erect vertebral columns as males. But in the city the little misses are confined a great portion of the time in over-heated and unventilated apartments, permitted a pastry diet, and cramped with appliances used to give a fashionable turn to the waist, the besetting sin of American ladies. Under such influences what chance have they for a well developed, symmetrical body? Much mischief is often done by dressing little girls low in the neck, leaving the shoulders bare except a narrow band which crosses the upper part of the arm in a way to pinion it. And then the little things are obliged to hitch and twist their shoulders with a view of keeping up their dresses. Such a habit, confined as it often becomes to one side, developes the muscles on that side more than the other, and displaces the spine enough to disturb the equilibrium of the two shoulders.

At boarding schools, females do not generally obtain the most proper exercise for physical development; they are compelled to walk a certain distance in solemn procession, two by two, with a measured pace, which is not much better than an hour's work on a tread-mill. It does not give that flow of spirits so necessary to ensure active digestion, with attendant vigor of nerve, muscle, and bone. The dress of young females is often such as to restrain the exercise of the muscles of the back, hence they become too feeble and slender to support and balance the weight of the head, and prevent the spinal column from deviating. The immediate cause of curvature in such cases, of course is purely mechanical; and in the treatment this, as well as the predisposing cause must be regarded.

Treatment.—No particular treatment can be laid down as applicable in every case. Sometimes spinal distortion depends upon the abnormal contraction of the sterno-mastoid muscles of the neck. In such a case the shoulder on the the opposite side is elevated involuntarily to lessen the strain on the head; the elevated shoulder gives the dorsal part of the spinal column a degree of convexity, and the lumbar portion bends in an opposite direction to preserve the balance of the trunk, thus a curvature results, which if left to itself will become extensive, and permanent. To avoid serious and lasting deformity in a case of contracted sterno-mastoid muscle, this faulty agent should early be divided subcutaneously as a tendon is cut in a club-foot operation.

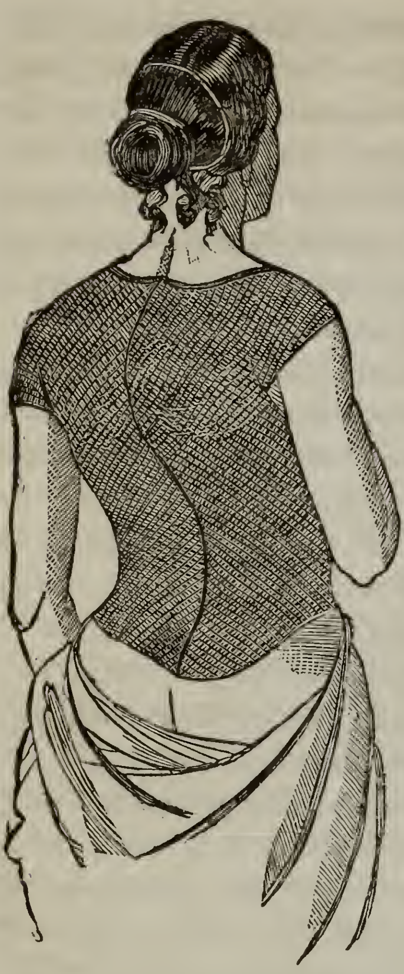
Some years ago M. Guerin, of Paris, carried to an extreme the division of dorsal muscles for the cure of spinal curvature. Guerin's theory is this;—"all spinal distortions should be classed with club-feet, wry-neck, contracted knee, etc., and as the muscles of the foot, leg, or knee, by their contractions, produce certain deformities, which, arising from the same cause, perverted muscular action, present the same general character, and require for their relief the same operation, division of the contracted muscles; so also curvature of the spine may be considered as the club-foot of the back, depending on the contracted state of the muscles of this region, and requiring for its cure their division." Eminent surgeons of every country have tried the practice of its ardent advocates, but without the success that was at one time hoped of it. Guerin declared it to be safe, easy, and almost certain of affording relief, while in other hands the operation has been rarely if ever productive of the slightest benefit. Indeed, it is one of those hobbies so often ridden by members of the profession, and which seem to be as necessary for personal notoriety as a "topic" to a politician.

Diametrically opposed to Guerin and his followers, are those in the profession who strenuously adhere to the "do nothing" plan; and denounce all appliances as partaking of quackery, consequently as useless, and worse than that. However near the right they may be, it is evident that some of them are as persevering in their attempts to secure to themselves the reputation of advocates of one side of the question, as their opponents are for the other.

Dr. W. J. Little, Physician to the London Hospital, states that he believes "an eclectic plan of treatment to be preferable to any of the methods which have been exclusively recommended." Each of the many means recommended may possess a certain efficacy in selected cases, and a combination of several of them in a well arranged plan, may be especially useful. The recumbent posture continued for months will be followed by such a degree of emaciation in the dorsal and lumbar muscles that they become totally incapable of sustaining the spinal column in the erect position; therefore such treatment should be recommended with caution, although it has advocates in high places. Stretching, and pressure upon projecting parts, together with the horizontal position, will sometimes straighten the spine, and retain it thus during the continuence of the treatment, but the curvatures are apt to relapse again upon the resumption of the upright position.

Some years ago Sir Marshall Hall, recommended the following course to be pursued in the treatment of lateral curvature of the spine: "Let the patient be artificially made to assume the straight or perfect form by means of posture, stretching, and pressure; under these circumstances carefully preserved, let a cast of the bust be taken in plaster of Paris; from this cast let a mould in wax be taken; lastly, on this mould let stays of steel be accurately fitted, (or let copper be deposited by means of the electrotype and sawn in two vertically). This is to be covered and lined with soft leather and slight wadding, and fixed and worn in the ordinary manner, drawn to the proper degree of tightness. It is obvious that those stays being put on and fastened in the recumbent posture, the bust *must* retain the perfect form, although the patient may now resume the erect position; and no partial or injurious pressure will be made on any part, and there is neither any constrained position nor any obstacle to the due use of the muscles. Such a stay may be always worn, even by the incurable; but to the curable it affords the opportunity of assuming the erect position and of adopting the most appropriate exercises, even in the open air, not only without injury, but with every benefit which can accrue from them. On each point tending to project, efficient pressure is made, whilst to the yielding portions of the spinal column efficient support is given. Thus pressure and support are equable. No injurious pressure is made on the bones of the pelvis, preventing their just development. No violent pressure is made on any part. There is, in a word, *no* pressure from without. The pressure which does take place is that induced by the assumption of curvature, of which the support produced becomes the immediate preventive or curative."

In place of the "stays of steel" or electrotype bust, I use a "waist" of woven wire, which is fitted to the form by patterns or plaster casts. It is flared to rest easily upon the bones of the pelvis and projections of the hips, and, lacing in front, is brought on over the shoulders like a garment. The axillary spaces, are well padded to avoid irritation, and padding is put in from time to time, between the abnormally projecting ribs and the wire waist. This when managed judiciously, will do much towards restoring the body to its natural form. It does not press violently upon the pelvis, nor any other part; and has elasticity enough to make it always easily borne. The instrument may have a place in the dorsal part for a steel bar or stay, which may be used in cases where much support of that character is required. And a second lever may be fitted firmly in the meshes of the wire at the left hip, and extend to the back part of the left shoulder; and belts of webbing can be made to extend from this around the projecting ribs, to pull them up and back into place. The whole apparatus should be well lined, covered, and padded; and renewed as often as the growth of the patient requires it. When the lateral curvatures have been forced into line, and the distorted bones have had time to harden, and resume their natural shape, there will be no further need for artificial support.



This diagram is intended to represent a woven wire waist, that may be used in the treatment of lateral spinal curvature. It rests upon the hips and other parts of the pelvis, and encases nearly the entire trunk, forming a flexible support to the swaying body. (Original.)

In addition to the mechanical means used to restore the body to shape something should be done to change the habit or predisposing influences, and establishing a vigorous state of health. Females of delicate constitutions should be made to take appropriate exercise. By the sedentary this should be begun with care, lest over-exertion do much harm. Pressure with the fingers along the spinal muscles, frequently repeated, will call blood to the parts, excite healthy nervous action, and restore healthy nutrition in the atrophied muscles. Electro-magnetism, applied in gentle currents, has a stimulating and tonic effect upon the weakened tissues, and in many instances it has proved an admirable adjuvant in the treatment of this perplexing difficulty. The diet should be meat, potatoes, and bread of unbolted flour, and not delicacies as are often craved to the exclusion of the more substantial articles of food.

As a preventive of the disease nothing is so effectual as an active physical training. Among the ancients the Greeks were the best developed, and acquired the most perfect forms. The secret of their bodily symmetry consisted in the attention given to gymnastic exercises. The youth were regularly trained in athletic games, and schools for this purpose were supported at public expense in all the towns of Greece. The consequence was that few physical deformities were known among that celebrated people, and nearly all enjoyed that greatest of all earthly blessings, sound bodily health.

SPINAL IRRITATON.

BY M. W. HENRY, M. D.

Esq. W. aged 44 years, was attacked about two years ago with pain and swelling in the spermatic cord and testicles of one side. No other symptoms were noticed at the time of the attack. This condition of the patient lasted about one month, when the pain and the swelling entirely subsided but the general health seemed to be somewhat impaired. These attacks succeeded each other every four or six weeks, and increased both in frequency and severity. At about the fourth month of the attack, Dr. L——, (a physician of respectable attainments,) was called to see the patient. It appears that he did not in his diagnosis satisfy himself in regard to the true nature of the difficulty, as the patient was unable to learn anything definite from him in regard to his disease. His treatment seemed to be directed especially to the local symptoms as manifested in the cord and testicle.

In August 1857, Dr. L——'s services were discontinued. During all of this time, the patient's symptoms both local and constitutional, seemed to be increasing in severity. And nothing farther was done for the relief of the patient, who had almost despaired of ever receiving any benefit from medicine. But in February last Dr. J. was called, who requested that I should visit the patient in consultation with him, and also assist him in the treatment.

At the time I first saw the patient his symptoms was about as follows:—swelling and pain in the cord and testicles, aching in the limbs, a want of ability to control the muscular system at times almost amounting to paralysis, restlessness, wakefulness, frequent starting in his sleep, dulness of intellect, and occasionally slight nausea, He discharged his urine very irregularly, at times profusly and at others sparingly. It was more or less highly colored all of the time.

It would perhaps be proper here to remark, that the testimony of the patient was that he never had venereal disease, and that his statement is worthy of the fullest reliance. Upon examination we found great tenderness upon pressure along the lumbar vertebræ, also in the upper dorsal and lower cervical, with slight tenderness extending up to the occiput. We knew the sympathy existing between the middle portion of the cerebellum and the genital organs, and also that a number of cases had been reported in which the genital organs had been sympathetically affected in disease of the spinal cord which was sufficient to account for all of the symptoms in the case; but in order to make our diagnosis more certain we applied several tests to the urine, yet made no important discoveries. After applying the nitric acid tests there were seen floating in the urine a few small shreds of coagulated mucus, but not enough to indicate any serious disease of the urinary organs. Being now satisfied that the disease consisted essentially in spinal irritation, we adopted our treatment accordingly. The treatment was premised by Dr. J., he having administered a free emetic to the patient on his first visit.

℞. Podophyllin, grs v.
Leptandrin, grs. x.
Sanguinarin, grs x.
Taraxicum, q. s, to form pill mass.

Divide into twenty pills. Let one be taken every six hours until the bowels are moved freely. They were then directed to be continued, as an alterative, so as to act very gently on the bowels.

To relieve the restlessness and wakefulness, the compound powder of ipecacuanha and opium was prescribed in five grain doses, every four hours, until the patient became quiet and easy. We applied a blister the whole length of the spine, as a revulsive and counter-irritant. The blister was kept discharging. Under this treatment the patient recovered rapidly. The above treatment was continued without any very material alteration until the patient was restored to health, a state he has enjoyed uninterruptedly for the last six months. The symptoms of this case were such as are likely to mislead the inexperienced, and on that account I have been induced to report it. Local manifestations are too often treated for the disease which may be quite remote.

EDITORIAL DEPARTMENT.

INSTRUCT THE PEOPLE.

One of the most frequent charges which the self-styled *orthodox* members of the profession make against those who favor liberality and independence, is, that we *appeal to the people*, and endeavor to make them capable to decide, or to think they are capable of deciding, in regard to some matter which these persons say are out of the reach of the intellect of those who have not passed the regular curriculum of professional studies, or obtained a professional standing in some way.

Any endeavor to enlighten the public is sure to incur their censure and condemnation. It is true, men have taken upon themselves the functions of teachers to the public, who neither by nature nor by education have been well fitted for the occupation, and their dogmas as well as the mode adopted for their presentation have been proper subjects for animadversion. But many have not only condemned the manner and the matter of these "Lectures," but have condemned the idea of public enlightenment, however and by whomsoever presented, in all matters pertaining to physiology, or *anything* that is supposed likely to effect those who claim for themselves and their associates, a "divine and exclusive right" to practice our profession.

This opposition to the spread of information among the people is not by any means rare. It is common. It is *fashionable;* but mainly confined to those persons and those periodicals that can never hope to occupy a higher than a third or a fourth rate position in the profession. Of those who are vainly trying to obtain and retain a position before the public by keeping that public in ignorance, a specimen recently published an article from which a few extracts are given, as showing the position taken.

"In our science and art there are many, many facts which should never be given to the public. *We are opposed to teaching the public physiology or anatomy, or, even more, chemistry.* * * * * We have in our public schools and academies a little physiology and anatomy, taught to little boys and girls, with the result of making them little fools. So, too, the public who listen to the so-called lectures on physiology and phrenology by traveling humbugs and quacks, are in the main made incurably foolish. They loose faith in medicine, in doctors, and what is still worse, they loose their own good sense. * *

"Popular lectures on physiology * * * should be scouted by every gentleman and scholar of the legitimate profession. We would have them use their influence with their patients and friends against these."

In refreshing contrast to the narrow and bigoted persons of whom the writer of the above is a specimen, is the course pursued by Sir Benjamin Brodie, Mr. Wakely the Editor of the London Lancet, Sir John Forbes, Dr. David B. Reed, who has passed years in enlightening the public in regard to matters pertaining to the public health, and hosts of others in Great Britian and Europe who occupy high social as well as professional positions; and the State Medical Society of the State of New York, who annually delegate one of their number to deliver an Address on some popular medical topic to the assembled Legislature, which lecture and other papers is afterwards published at the expense of the State and distributed gratuitously for the benefit of the people.

In many other places a similar course is pursued; and of late the most interesting articles contained in our secular and religious periodicals, are those which relate to the physical health of the people, and causes of disease and method of cure; with the influence of physical health and its derangements on the prosperity and morality of communities.

The people need and *will have* instruction, more or less commingled with error, in regard to these matters; and it is a matter of policy as well as of the highest duty, for physicians to impart the proper and needed instruction.

The coming winter, when the long evenings and the absence of pressing busy cares invite to mental effort, will be a proper time to engage with activity in this matter. It is not necessary (however convenient) to have expensive appliances, as manikins, skeletons, charts, or plates. A black-board and chalk will answer for charts and diagrams, and a few pieces of turnip, potatoes, beets, or carrots, properly fashioned with the pocket knife, may be made to take the place of skeletons and manikins. These simple and unrepulsive appliances are often *prefered* even where the others are at hand.

A Lecture Hall, and a set audience is not always desirable, although at times the most productive of pecuniary reward. The parlor, or the social fireside, with a class of a limited number, and conversation and familiar illustrations, with free question and answer, may at times favorably supercede the more formal mode of imparting instruction. Even classes composed of mothers and their daughters, may be made as useful to enhance the welfare of the community as larger and promiscuous gartherings.

But whatever may be the most desirable mode to adopt, physicians have a *duty* to perform in this regard, and their reward is sure to be commensurate to the ability and faithfulness with which this duty is performed. When the people are led to know and to reflect in regard to the value of the individual and public health, they will not be slow of forming a judgement in respect to who is, as well as who is *not* deserving their confidence as medical counselors and advisers; and if at any time they err in that judgement the error will be the result of ignorance, and not of too much knowledge.

We would earnestly recommend our readers to, as soon as possible, and in some way, set about doing their duty as teachers, and conservators of the public health. No great preparatory expense of time or money is required. Every physician, by virtue of his education and calling must know many matters pertaining to hygiene, with which his friends are less intimate than he is, or are altogether in ignorance; and this information he should impart. But if he is deficient in the intelligence he desires to convey to others, he owes it to himself as well as to the people who place their trust in him, that he obtain that information as soon as possible.

Whatever method is thought proper to adopt,—whatever appliances are made use of,—whether the people can be induced to receive information in large or in social gatherings,—whether the profession has heretofore opposed or favored the idea, we feel like repeating to our friends the advice, to INSTRUCT THE PEOPLE.

BOOK NOTICES.

Concentrated Organic Medicines; Being a Practical Exposition of the Therapeutical Properties and Clinical Employment of the combined proximate medicinal constituents of Indigenous and Foreign Plants. To which is added a brief History of crude organic remedies, constituents of plants, concentrated medicines, officinal preparations, etc., etc. By GROVER COE, M. D. Published by B. Keith and Co., New York, 1858.

IN general intention, this work is like the *Positive Medical Agents*, published by the same firm four years since, and at the first glance might be supposed a New Edition of that work, with a new title. But even a casual examination will discover their dissimularity of design *and unity of purpose*, for *both are intended as advertisements* for the preparations sold by the publishers.

The former work was written by one, who as he said, was ashamed of his task, and hence did not allow his name to appear in connection with his book. The latter was ostensibly written by one who has loaned his name to be used by an irresponsible scribbler entirely destitute of any high scientific or literary merit, to sustain one of the grossest impositions on the profession, that has been attempted in modern times. By a reference to the *Worcester Medical Journal* for 1856, or to the COLLEGE JOURNAL for the same year, our readers will understand the matter to which we allude.

But we would at present ask more particular attention to the book just published, and not to the individual who has allowed his name to appear in connection with it.

If any person should put faith in the title above given, he would be deceived. The title was chosen to deceive, as the book was written and published to deceive, and to aid in other deceptions and impositions; and the author plainly lays himself liable to the supposition that such was his intention, for, in reference, doubtless, to the work published in 1854, he speaks of being "unalarmed by the fates of his predecessors."

It has been stated that the book was written to aid in deception; and even a slight examination of its contents must prove the statement correct, without any reference to the former acts of the parties interested in bringing it before the profession. It lays claim to being a scientific book, and yet its author falsifies science in the nomenclature he makes use of, as well as in his attempted presentation of facts. The book purports to furnish the profession with desired and reliable information in regard to Concentrated Organic Medicines, and yet does not contain any information in regard to their manufacture, appearance, or any reliable statements in regard to their doses or uses; and quite a number of preparations are named, and doses are mentioned, which, if the medicine is pure, must prove greatly injurious if not fatal to one who should be so unfortunate as to rely on this book, and take the dose named.

But the nature of the statements indulged in, and the extreme carelessness of the writer can perhaps be best illustrated by making a few quotations. "All extracts become entirely inert in one year from the time of their preparation." Fluid Extracts "as a general thing, contain very little of the active medicinal constituents of the plants from which they are derived, and frequently none at all. We think we may justly claim therefore, that the concentrated remedies described in this work are superior and more nearly complete than any yet offered to the profession." This statement is rendered interesting, inasmuch as no concentrated medicines are described in the work.

It may be well to compare philosophy with practice, precept with example. "The true value of concentrated remedies, can never be estimated unless they are singly and thoroughly tested. One simple will often answer a better purpose than half a dozen combined." We consider this admirable philosophy, yet in looking at the first seventy-five prescriptions in the book, we find they are all compound but three. In the former work from the same house, there were such combinations as follows:

Podophyllin,
Leptandrin,
Hydrastine,
Caulophyllin,
Phytolacin,
Sanguinarin. M.

Hydrastine,
Xanthoxylin,
Cornine,
Cyrpipedin,
Scutellarin
Syrup,
Flour. M.

Leptandrin,
Hydrastine,
Geranin,
Cypripedin,
Asclepin,
Phytolacin,
Xanthoxylin. M.

Podophyllin,
Leptandrin,
Xanthoxylin,
Geranin,
Lupulin,
Stillingin,
Senecin. M.

And many pages of the work are filled with prescriptions, of which the above are samples.

One other quotation, (and to this we invite the special attention of those engaged in the manufacture of medicine,) will serve to show the character of the statements indulged in by the author.

Writing of B. Keith, the author says: "To this gentleman and his co-laborers in the field of *organic chemistry*, belongs the credit of being the *first to discover*, *describe*, *and introduce to the profession all but two of the concentrated preparations enumerated in this work*"!!!

Among the preparations enumerated, Amygdalin, Baptisin, Camphor, Caoutchouc, Cornin, Capsicum oil of, Dextrine, Emulsion, Erigeron oil of, Hydrastin, Irisin, Jalapin, Lupulin, Leptandrin, Mucillage, Lobelia oil of, Proteine, Podophyllin, Sanguinarin, Strychnine, Veratine and others; nevertheless, our "bold author, who writes a preface," has also written as quoted above.

Much might be written in regard to the *doses* named, of the medicines described; as, *two grains* of Podophyllin, and *half a grain* of Veratrin; but we are cautioned to remember that *these* preparations are unlike others of the same name. So also, of the literary character of the work. It purports to be written by one person, yet the word *we* occurs in it, as representing the writer, very often, sometimes in nearly every line.

But enough has been written to indicate the character of this publication—far more than its importance would demand;—but as Journalists we are often called upon to *warn* our readers of the errors and dangers to be met with in the works of *pretenders*, to a greater length than at first would seem necessary; the same as a traveler would perhaps need a guide to accompany him over a route beset with pitfalls and dangers, while a simple word of direction would suffice to give the necessary information where no harm was to be guarded against.

Women, Their Diseases and their Treatment; By John King, M. D. Prof. of Obstetrics and diseases of Women and Children, in the Eclectic College of Medicine, Cincinnati; Formerly Prof. of Materia Medica, Therapeutics, and Medical Jurisprudence in the Memphis Institute; Author of the American Eclectic Dispensatory, the American Obstetrics, the American Family Physician, etc. etc. etc. Cincinnati, Ohio; Longley Brothers, 1858.

This long promised work is now published, and we can without any hesitancy recommend it to the profession as a valuable production. The author is well known as a good writer and sound reasoner; these qualities added to a long and successful practice in diseases peculiar to females render this his latest work, one of unusual interest to the medical practitioner.

To make a work of this character of any value to the profession it is not sufficient that the writer be a *good compiler*, as the market is already over-stocked with books gotten up by such authors; but it is necessary that he bring to his aid an experience of many years, in which he has proven the soundness of the principles and the efficacy of the remedies which he recommends.

This work is divided for convenience into five parts:

Part I, is confined to the description of the external organs, their diseases and treatment.

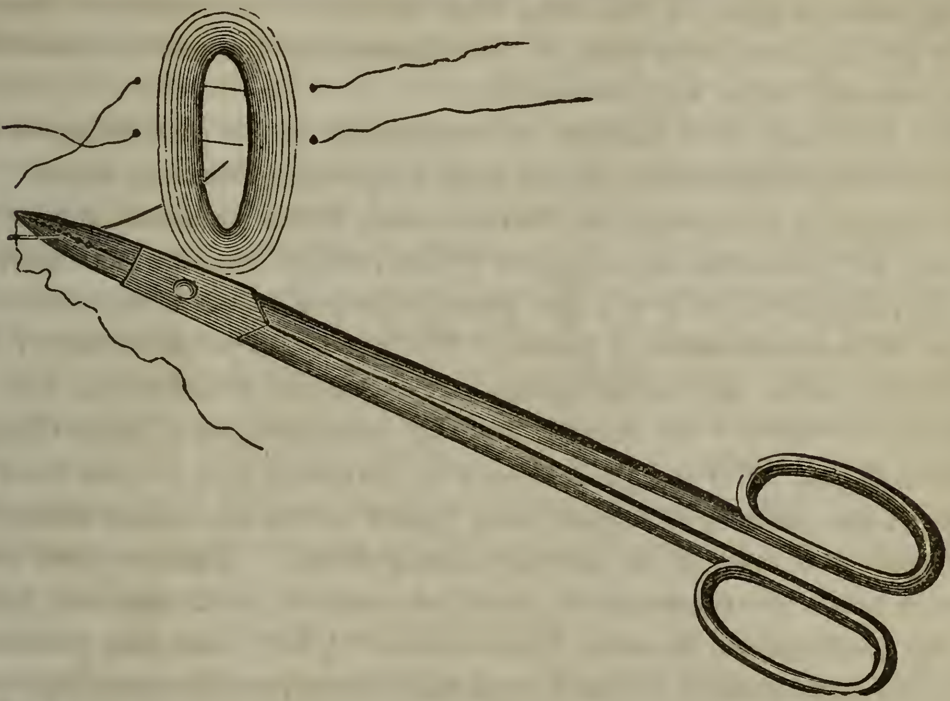
Part II, is devoted to the diseases of Internal Organs. In this part is a paper from the pen of Prof. Howe, on Vesico-vaginal fistula, and the various modes of operating for the relief of that malady; and from the known reputation of Dr. Howe as an operating Surgeon, and the clear and forcible manner in which he describes the subject, this article adds not a little to the value of the work.

Part III, comprises a description and treatment of the various functional disease to which the female is liable.

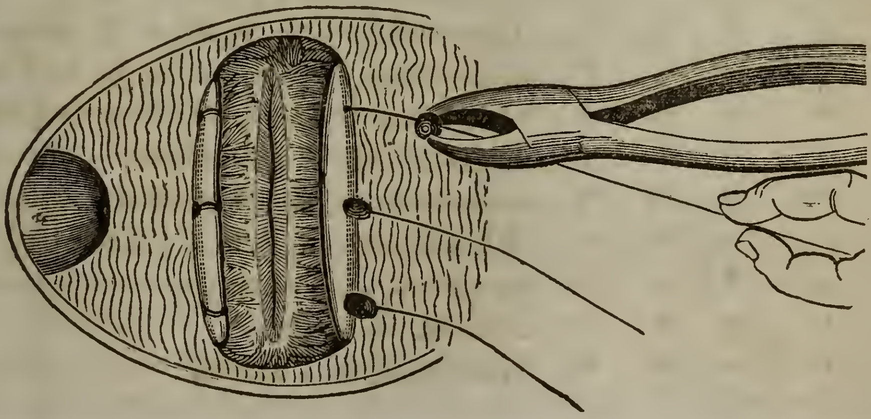
Part IV, written by Prof. Cleavland, contains a description of the Female Breast, and the diseases with which it is frequently affected.

Nothing need be said of this part of this valuable book other than that it bears the imprint of a master mind.

Part V, describes the composition of most of the remedial compounds recommended throughout the volume.



Each part when the text requires it, is well illustrated with original and well selected cuts. We insert the accompanying figures as an illustration of the character of those used in the work; the first, found on page 135, is a representation of Howe's forceps and needles, and the manner of using them in operating for the relief of transverse fistula of the vesico-vaginal walls. Figure second, found on page 137, represents a section of the vagina and the manner of applying the cylinders and shot, an operation which is often preferable to the old fashioned suture.



Formulæ for making Tinctures, Infusions, Syrups, Wines, Mixtures, Pills, etc., simple, and compound, from the Fluid and Solid Extracts, prepared at the Laboratory of Tilden & Co., New Lebanon, N. Y., 1858.

The vast and rapid increase in the sale and use of Extracts containing the essential qualities of medicinal plants, and the convenience of using them in place of the drug from which to manufacture Syrups, Infusions etc., renders a work of the character of the one this doubtless was designed to be, very desirable.

But there are two failings or over-sights in the production of the work under consideration, which must very much lessen its value.

Although it is devoted to Extracts and Fluid Extracts, it does not present any information in regard to the mode of manufacture adopted by the publishers, or in any way provide the profession with any data to judge of their character or power. We know the preparations of this Company have heretofore given very general satisfaction, and no attempt at secrecy in regard to their products have been charged against them. But the profession will naturally look to this book for positive and definite information in regard to the medicines offered for their use, and only to be entirely disappointed. It is true that reference is made to various works which *do* contain information in regard to the preparation of some Fluid Extracts; but what the profession feel they have a right to know, and must know, ere they can have confidence in *any* preparation sufficient to warrant them administering it to their patients, its the mode of preparation, so far as shall enable them to judge of the products obtained.

But this is not the most serious error to be found in this book—*The doses of the most powerful medicines are too large.* As an illustration, we need cite but a few instances.

The dose named for Podophyllin, is, ⅛ to 3 grains,
" " " " Digitalin, is, ½ grain,
The dose for Tincture of Aconite, is, 10 to 30 drops,
" " " " Belladonna, is, 40 to 60 drops,
" " " " Cannabis Indica, is, 25 to 50 drops,
" " " " Cimicifuga Racemosa, is, 2½ to 5 drachms,
" " " " Colchicum seed, is, 10 drops to ½ drachm,
" " " " Ergot, is, 2½ to 5 drachms,
" " " " Gelseminum, is, 15 to 60 drops,
" " " " Hyosciamus, is, ½ to 1½ drachms,
" " " " Sassafras, is, 1 ounce,
" " " " Lobelia, is, ½ ounce,
" " " " Bloodroot, is, 1 ounce,

The dose of Extract of Colocynth, is, 2 to 30 grains,
" " " Podophyllin, is, 3 to 12 grains.

No one who has been accustomed to prescribe for the sick will *dare* to order these medicines in the doses named above; and we suppose the error has arisen from the fact that the book was written by a person who knew nothing about the practice of medicine. No one should ever venture to act as a guide to others until his opinions have stood the test of ample personal experience; and especially none should venture to write an opinion in therapeutics except as the result of oft-repeated and careful personal testing and observation.

We regret the necessity of making these remarks. The Tildens, by their honorable, scientific and open mode of dealing with the profession, have won golden opinions, and the preparations they have manufactured have proved very generally satisfactory, and we would gladly aid those who have withstood the temptation to produce inferior articles; but as conservators of the welfare of our chosen profession and humanity, we cannot let these mistakes pass unnoticed. We feel sure the publishers of this book will thank us for thus calling their attention to these matters.

◆

A Text-Book of Vegetable and Animal Physiology. Designed for the Schools, and Colleges in the United States. By Henry Goadby, M. D., etc. etc., embelished with upwards of Four Hundred and Fifty Illustrations. New York: D. Appelton and Co., 1858.

The Title-page fully details the character and design of this unique work, except, perhaps, it might have been proper to add; *as revealed by the microscope.*

The use of the microscope has originated a new science,—Histology, or the science of the *tissues*, the minute structure of parts; and Prof. Goadby has shown to us by his descriptions, and remarkably lucid illustrations, how closely allied are the peculiar structure of parts in animal and vegetable growths. As the use of the microscope in scientific investigation is recent, so the beautiful and valuable science of Histology, the gift of the microscope, is a modern science. We wish an extensive sale of this valuable contribution to this modern science.

◆

Wells' Principles and applications of Chemistry, for the use of Academies, High schools and Colleges. Introducing the latest results of Scientific discoverey and research, and arranged with special reference to the practical application of chemistry to the arts and employments of common life. With two hundred and forty illustrations. By David A. Wells, A. M. New York: Ivison & Phinney.

The above title fully sets forth the claims of the work. Upon opening the book and reading it, the eye quickly discovers mistakes, and errors both of style and of fact. For instance, on page 14 he says: "Capillary attraction is that variety of molecular force which manifests itself between the surfaces of a solid and liquid." To every discriminating mind this statement readily appears to be, as it is, erronious. This is not the definition of capillary, but of adhesive force, of which the capillary is but a single example under modifying circumstances, being only exhibited in tubes of *hair-like* calibre. He falls into the error of making a subordinate fact assume the position of the general. Again, on page 15, he says the term capillary is derived from the Latin word *capilla.* This is not the case, there being no such word; it is *capillus.* This shows either ignorance or a carelessness which is inexcusable in a work claiming to teach science.

On page 60, occurs the following uncertain and inelegant sentences: "The *estimated* temperature of the space above the earth's atmosphere has been *estimated* at 58° below zero." On page 57 he says; "Ice contains heat in large quantities. Sir Humphry Davy, by friction, extracted heat from two pieces of ice, and quickly melted them in a room cooled down below the freezing point, by rubbing them againts each other." On page 61 "the friction of the surface of wood or of metal in contact *disturbs the latent heat of these substances and renders it sensible.*" From these we would conclude that the heat was derived from the bodies rubbed against each other, but the late experiments of Mr. Joule, and others, clearly prove that such is not the case, but that the *force expended*, in producing friction, *is converted into a definite quantity of caloric.* That Mr. Wells was not ignorant of this while penning the above error is clearly proven by reference to page 61, where after stating Mr. Joule's experiments in brief, he concludes thus: "It thus appears from these experiments, that *force* expended in producing friction *is converted* into heat, and that when a pound of water is elevated in temperature one degree, some force equivalent to the raising of a weight of about 772 pounds to the height of one foot is always exerted."

Here the student is taught one thing on the top of the page which he is obliged to unlearn before he finishes it, a condition of things very unsatisfactory and undesirable, since it must leave the pupil in doubt as to what to disbelieve. It shows a want of mature thought upon the part of the author which is wholy inexcusable in one who undertakes to teach the plastic minds of youth.

That the book contains much which is new and not readily procured in other text books is true, and occasions the more regret that they should be found in company with error. To those who are prepared to select its truth and discard its errors it will prove worthy a perusal, for the position of the author as Editor of the "Annual of Scientific Discoveries," has made him the great store-house to which new truths have floated as fast as they have been developed by the many mighty minds upon both continents who are incessantly working for the advancement of science.

Ventilation in American Dwellings; with a Series of Diagrams presenting examples in different classes of Habitations. By David Boswell Reid, M. D., F. R. S. E., etc., etc. To which is added an Introductory Outline of the Progress of improvement in ventilation. By Elisha Harris, M. D., etc. New York: Wiley & Halstead, 1858. Sold by Robert Clarke & Co., Cincinnati.

For years, the medical profession have been urging upon the people, and local officers, the necessity of more attention being paid to the subject of ventilation, as a means of presrving health and averting disease.

The subject has attracted the attention of the medical members of the learned societies and of legislative bodies, but no effective measures have been adopted except in those public charities more immediately under the control of physicians, as Asylums, Hospitals, etc.

The recent disastrous outbreak of disease at Washington, known as the "Hotel Disease," has however awakened the nation to the importance of ventilation, and the work of Dr. Reid has appeared very oportunely to supply the demand for farther and reliable information on this subject.

No man has given as much attention to the subject of ventilation as Dr. Reid. No one has enjoyed oportunities equal to his, for the proper understanding the whole matter, and putting the conclusions he has arrived at to the most severe and oft-repeated scientific tests; and possessing the mental capacity in an eminent degree to comprehend the entire subject, he has presented the world with a book of great value. We earnestly advise all who in any way, as builders, controllers of the erection of buildings, or any gatherings of the people in buildings, but particularly, those of our profession, to obtain and carefully read this book.

The American Animal Kingdom, considered Anatomically, Physically, and Philosophically, by Emanual Swedenborg Translated from the Latin by J. J. G. Wilkinson. E. Mendenhall Publisher, Cincinnati, O.

It would be needless for us to say that the writings of Swedenborg re universally admired wherever they are read; and however much may differ from him in his religious views we can but admit that for beauty of language, strength of argument, and vigor of thought, his productions stand unrivalled and alone. There is that about them which never fails to impress the intelligent mind with the honesty, candor and originality of the author. He writes what he believes to be true.

It was with mingled feelings of curiosity and hope that we opened the work noticed above. With a curiosity naturally excited by the fame of the author as a metaphysical writer, and a hope that the same vein of originality and flow of soul would characterize this, as were evinced in his other productions.

The anatomy of this work is composed of extracts from the best authorities of his day as Heister, Swammerdam, Winslow, Boerhave and Malpighi, and is well compiled, although for a correct and satisfactory anatomical description of the various organs of the body, the reader will be better satisfied by an examination of the more recent works on anatomy.

The remainder of the book is made up of the author's original deductions from these anatomical facts, and as we peruse its pages we are compelled to admit that the profession have advanced but little since the days of Swedenborg in the science of human anatomy.

It is indeed a book that should be in the hands of every thinking man, and we would recommend it to the profession as every way worthy their consideration.

Of Nature and Art in the Cure of Disease. By Sir JOHN FORBES, M. D., etc. etc. From the Second London Edition. New York: S. S. & W. Wood, 1858.

IN this little book, and from its renowned author, we had hoped and expected much; and in the strong condemnation of the *heroic* mode of medication too commonly prevalent, we have not been disappointed. But, while the author strongly depicts the errors of others, he apparently falls into errors of scarcely less magnitude; and if the reader does not divest himself of the natural reverence for position and attainments of the author, and refuse to be guided by him, as Dr. Forbes refuses to be guided by authority, more harm than good may be done by the book.

The subject is one of deep interest, and that the master minds of the profession are willing to investigate it is very hopeful, and if any one is fully prepared to examine this book as critically as its author does the doctrines and practices of others, its perusal may do good, but those whose time is limited and whose tastes are not critical, we cannot commend it.

Mind and Matter ; or Physiological Inquiries ; In a series of Essays intended to illustrate the mental relations of the Physical Organization and the Mental Faculties. By Sir B. Brodie, Bart, D. C L., Vice president of the Royal Society. With additional Notes by an American Editor. New York : S. S. & W. Wood, 1858.

Some years since this little volume was published in England and met with a reception due rather to the reputation of the author than any deep interest felt in the subjects discussed. At the present time, when Psychological science commands the attention of more minds than formerly, it will probably meet with a broader sale and more attentive readers; but it can never take the place of, or supply the demand for, the more elaborate as well as more satisfactory work on kindred subjects by Dr. J. J. G. Wilkinson.

The Dispensatory of the United States of America. By George B. Wood, M. D., etc., Eleventh Edition. Carefully revised ; Philadelphia ; J. B. Lippencott & Co., 1858.

Ever since the issue of the first edition of this work, twenty-five years ago, it has been growing, increasing in value, and in the estimation of the profession. The present edition has been improved by changing the title of the former Appendix, and calling it Part III; adding to the list, and extending the notice of agents mentioned in it; *it also makes much more apparent, the former unwillingness to give proper credit to a certian class of observers, for their contributions to materia medica.* It is a good book, and an improvement on former editions.

EDITORIAL ABSTRACTS.

Quinia in Typhoid Fever.—When large doses of the sulphate of quinia are mentioned as being used in typhoid fever, the reader should understand that *Enteric* fever is always meant, and not that form which is sometimes spoken of (erroniously) as typhoid.

Dr. Fuller gave a boy eight years old ten grains of sulphate of quinia at a dose, once in two hours until three doses were taken, when "the pulse came down, his skin was cool and moist, diarrhœa ceased, and his tongue was moist." As the disease had yielded, the quinia was continued in only two grain doses, repeated three times a day. Dr. Fuller and others report other cases where large doses of sulphate of quinia proved equally beneficial.

Gum. Is it nutritious?—Dr. Hammond in a course of experiments on himself relative to the nutritive value and physiological effects of albumen, starch and gum, concluded; that Gum is altogether *incapable of assimilation*, and therefore possesses no calorifacient or nutritive power whatever; but is, on the contrary, a source of irritation to the digestive organs. Its use in many diseases of the alimentary canal always proves harmful.

Tracheotomy in Croup.—Our readers are referred to an article on Croup by Dr. Buchanan, published in a previous number of the College Journal, and as an Addenda we present an Abstract of a paper read recently before the Buffalo Medical Association by Prof. T. F. Rochester, Professor of the Principles and Practice of Medicine in the University of Buffalo.

M. Ferrard mentioned sixty cases of croup, and all fatal. M. Valleix found in fifty-four, but seventeen recoveries. Dr. Bard of New York lost seven of sixteen; Dr. J. F. Meigs ten out of twenty two; Ware, ten out of fourteen; Clark, two out of five; Horace Green, three out nine.

The French have been the most decided advocates of tracheotomy as a means of lessening the fearful fatality that has followed most modes of treatment in this disease.

It was strongly advocated by Brettonneau, of Tours, and many have followed his precepts and example. Perhaps Trosseau of Paris is now the most ardent supporter of this operation in France; and yet between 1830 and 1850 he performed the operation one hundered and thirty-five times, of which all terminated fatally but four. From 1850, to 1855, there were two-hundred and sixteen operations in the *Hospital des Infants* with only forty-seven recoveries.

Dr. Walter F. Atlee of Phildelphia who attended the Clinical lectures of Trosseau in 1852, in his Notes, quotes:—" *Under two years of age* the operation is quite useless; they die almost always of convulsions."

M. Guersant says he has operated, in 1850, twenty times, with seven recoveries; in 1851, thirty times, and thirteen recovered; in 1852, fifty-nine times, with sixteen recoveries.

Mr. Lawrence of London in 1855 reported two hundred and sixteen cases of tracheotomy which he had collated, of which forty-seven were successful; but how many times the operation had been performed where the fatal termination had *not* been reported, he did not know. In Great Britain, the general opinion of the profession is against the operation. Among its opponents are Williams, Byland, Cheyne, Copeland, Erichsen, and Porter. Porter says: "I have known and heard of the operation often but never understood that it produced a recovery." In 1856, Mr. Henry Smith read a paper on the operation before the London Medical Society, and he said his own experience had extended over several cases, all of which were unsuccessful. In the discussion following the reading this paper, the majority of the speakers considered the operation *justifiable*, which opinion led Mr. Smith to give the operation a further trial but he said; "The results have been disheartening, not one recovery has taken place; and doubts have arisen in my mind of late, as to whether the surgeon is justified in performing a severe and dangerous operation, when the results are so unfortunate."

The conclusion arrived at by Prof. Rochester, is expressed in the following words:

"A full, and we trust impartial investigation of the subject impels me to the conclusion, that Tracheotomy from its intense gravity, ought never be lightly or precipitately undertaken, affords a possibility of recovery when hope from other resources cannot reasonably be entertained and that the moment having arrived, it should not be neglected or delayed."

Death of the Lower Extremity from a Tight Bandage.—Dr. Dalton of Mississippi relates the case of a negro boy about sixteen years old whose thigh was fractured three or four inches below the great trochanter, and dressed with a bandage from the toes to the groin. In fourteen or fifteen days he was called to see him, and found the bandage on the upper part of the thigh had been removed a few days.

The whole limb with the exception of the upper portion of the thigh was in a state of *dry gangrene.* The upper two thirds of the thigh was enormously swollen, and gangrenous quite up to the groin. The limb was amputated as high up as possible, or about two inches below the great trochanter. The patient eventually recovered.

After the operation, the limb was carefully examined and found to be as dry and in as perfect a state of preservation as that of an Egyptian mummy. The muscles were as hard as wood or dried beef, and the veins and arteries entirely obliterated by the pressure of the bandage.

The Freezing Mixture, is much used at the present time in the Hospitals of Paris in amputations of fingers and toes, to obliterate pain. If the parts remain frozen too long, or are allowed to thaw too quickly, the soft tissues may slough.

Alum and Sulphuric Acid in Lead Colic—Both alum and sulphuric acid have many times been administered in *colica pictonum*, with a view of changing the salt of the metal into the soluble sulphate, allowing it thus to pass out of the system, and also of restoring the diseased muscular fibres to their wonted contractility. M. Briquet at La Charite teated fifty-seven patients by giving them as a drink sugar and water acidulated with sulphuric acid, and giving a quantity of alum with gum, and a pill with the extract of opium at night. All the patients recovered, but not quite as rapidly as those to whom additional purgatives were given to expedite the elimination of the metal.

Lead Colic—M. Briquet, on the idea that the seat of this disease is the *muscular coat of the abdomen*, and not in the intestines, advocates the use of galvanism to overcome the paralysis and consequently the disease.

Although the agent used produces relief, it does not prove that the muscles in the walls of the intestines are really the main ones affected. Becquerel, although accustomed to apply galvanism in the treatment of many diseases, does not rely on it in lead colic, but gives dilute sulphuric acid to change the lead into a soluble sulphate, and with eliminatives, carries it out of the system.

Venereal Warts,—Tincture of Iodine.—Most practitioners are consulted in regard to venereal warts, and sometimes find difficulty in their perfect extermination.

Dr. Monelle first cauterizes the wart with nitrate of silver so as to reduce it to the level of the surrounding cuticle, and then applies to the cauterized surface the tincture of iodine, and repeats the application three or four times daily for three days, when the ulcer is dressed with lint and simple cerate, and the sore heals rapidly. Ordinary warts may be removed from the hands or face by the same treatment.

Fibrine.—A writer in the *Medico-Chirurgical Review*, in reviewing the late works on Physiology, says: "The changes which four teen years have made, include the general abandonment of the notion that the *fibrine* of the blood forms the basis of the muscles; and the *converse* idea entertained by many physiologists and pathologists, that this substance is in a state of *retrogressive*, not of progressive metamorphosis."

MISCELLANY.

WORCESTER MEDICAL INSTITUTION.

We understand that a larger class than usual is expected to be present during the next Course of Lectures in the above well-known institution. If our friends are disappointed in the number of patrons they expect, then good signs will fail, and worthy men do not obtain what they deserve. We bespeak for the most liberal Medical School in New England, a large class for the coming session. The term commences the first Wednesday of November, at Worcester, Mass.; and continues sixteen weeks.

THE MENSTURAL ACT, OVARIAN.

In November, 1857, Dr. Oldham reported a singular case to the Royal Society of London, which possesses unusual physiological interest from the fact that it furnishes decided evidence of an *ovarian menstrual act.* The subject of the observation was a woman of twenty-five years of age, in whom careful and varied physical examinations have failed to detect any trace of a vagina or uterus; and no proof exists that these organs were ever fashioned or developed. The ovaries, instead of occupying their usual localities, were found at the external abdominal ring on either side, as if protruded through the inguinal canal, or hernied. They could be distinctly felt through the integuments, and were apparently of the usual size. But at pretty regular intervals of three weeks, one or both organs became tumefied and painful, as if affected by the menstrual function. For the first three years of the time the observations were made,—from the nineteenth to the twenty-second year of the female,—the right ovarium was exclusively affected with the periodical enlargement, and the intervals, were not regularly marked, ranging from three to six weeks, excepting the first year, when they were much longer, occasionally extending to three months. For the next two years the left ovarium was far more frequently affected, the right one remaining quiescent. Occasionally both are influenced at the same time, though one more than the other. "The accession of the menstrual period is sometimes suddenly felt. She will go to bed well, and in the morning the ovary will be swollen. More commonly, however, it is very gradual, augmenting in volume for four days, then remaining stationary for three, then gradually declining; the whole process before the ovary is reduced, generally lasting ten or twelve days. On separating the ovary when at the height of its swelling, from the tissues surrounding it, it appears scarcely, if at all, less than double its usual volume ; its outline is clearly defined, and it is plain that the whole, and not merely a part of the organ, is involved.

GLYCERINE AS A DRESSING FOR WOUNDS AND ULCERS.

Within the last few years Glycerine has become popular among the profession as an agent of extraordinary efficacy in the treatment of open wounds and ulcerating surfaces. Several foreign hospital surgeons have extolled its virtues, asserting that it will arrest phagedænic action, promote healthy granulation, and induce rapid cicatrization. Like the introduction of other new agents, glycerine has undoubtedly had ascribed to it more good qualities than the results of an extensive experience will warrant. Laterly it has assigned to it *solvent* properties when applied to tumors of a plastic nature. Among its advocates there are those who would "prove too much," manifesting in their zeal a lack of sound philosophy. Judging from its composition and practical effects, glycerine possesses no peculiar virtues. From its non-irritating oleaginous qualities, it forms an admirable dressing to exclude the air and prevent drying. But while it is more expensive, it seems little, if at all, superior to olive or almond oil. Indolent and unhealthy sores, which resist the influence of other like remedies, do not seem to change under a brief or prolonged application of glycerine. As a *menstruum* and vehicle for exhibiting other remedies, it is among the best of the oleaginous class. Of itself, it is an agreeable application, causes no smarting, excludes the air, keeps the parts moist, and does not adhere to the edges of a broken surface ; constituting, then, one of the most valuable of agents, and, perhaps, the best of the class to which it belongs ; but beyond these, any recommendations of its remedial powers become irrational, and not sustained in practice.

MARRIED.

In the M. E. Church at Akron, Ohio, by the Rev. J. W. Clark, on the 19th of Sept. 1858, Dr. L. A. Markham, of that place, and Miss Sarah E. Wert, of Franklin Ohio.

At Alexandersville Ohio, on the 31st of August, by the Rev. Isaac H. Riter, E. C. Sharp, Jr., M. D., of Williamsburgh, to Miss Dora S. Wuist, M. D., of Alexandersville. A professional copartnership was thus formed which we doubt not will be productive of the happiest results.

In Bellbook, Green Co., Ohio, Oct. 5th, 1858, by the Rev Joseph Hewson, Dr. E. W. Morgan, to Miss Ella, daughter of John M. Stake, Esq., all of Bellbook.

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ORIGINAL CONTRIBUTIONS.

SPASMODIC ASTHMA.

BY T. C. MILLER, M. D.

EVERY disease which comes under the care of the *scientific* physician will be treated by him with proper regard for "dietetic and climatic influences," for those influences can never safely be ignored. Dietetics is an extremely important part of hygiene, and must be considered in preventing, relieving and curing disease. Without a proper attention to diet the practitioner is a crude empyric. Dietetics and therapeutics are bound together, making a unity, and must ever be united or medication will be of little avail.

Climate has no doubt, a great influence on disease, particularly in the chronic form; but we are seldom able to remove our patients beyond the offending influences of climate.

Since I arrived at 27 years of age, I have had varying and extensive opportunities of observing cases of spasmodic asthma in different climates and I feel sure that climate *does not* exert as great an influence as Dr. Pope ascribes to it.

Not many of our patients can be removed to a different locality, and it is an error to suppose that what will afford relief in one case, will do so to all others. If we take into consideration our present diagnostic measures and powers in this disease, we will find that there are diseases and derangements of various organs which cause it. That one locality is more favorable to the relief of these derangements, no one will deny. But that I did not give much in regard to dietetic or climatic influences in my article in the May number of the COLLEGE JOUR-

NAL, does not argue that I am a blind follower of authority, or even that I disregard these things, but rather that I took for granted that every scientific physician *ought* to be *acquainted with them.* I have always preferred sound reason to hypothesis, and hence care little for what has been said in regard to *osmosis* in asthma.

To show how little influence climate has in this disease, I will present a recent case. A young lady had been afflicted with the dry or nervous species of the disease for five years. Her father had employed several physicians and among them a Professor of a Medical College, who laid great stress on change of air; and the lady had tried diverse situations, as on low, flat river-banks, and high dry, sandy regions. These changes made no impression on the disease. Then the atmosphere of a city was tried, but with the same result. One attendant gave her carbonic acid, as the best palliative she had tried; but he never could effect a cure.

Last winter I was requested to take the case, but declined; but in the spring, without any promise of relief, I took it in charge. On a most thorough examination I did not find any organ to be the primary seat of the disease. But the lady informed me that she had observed at times a profuse discharge of urine, but as a general thing it was normal in quantity. The spasmodic attacks occurred regularly once in three or four weeks.

At the time I took charge of her she was quite constipated, and I therefore gave her calcined magnesia for several days, but no other agent. To my surprise she had no renewal of the attacks of asthma for several days. This, and the irregular discharge of urine, led me to give attention to her kidneys, I gave her:

℞. Pulv. Coiceonellæ, ʒj.
Magnes. ust., ʒj

Mix and give a teaspoonful of the powder every two hours.

After repeating the prescription a few days the symptoms slowly subsided, until they were quite slight and appeared only once a week or so. I then gave the tincture of coiceonellæ thirty drops at a dose four times a day, for six weeks, and the disease has not returned to the present time.

All the physicians who saw this case called it one of spasmodic asthma, and yet a proper attention to the kidneys relieved the sympathetic difficulty of breathing.

CONSTITUTIONAL SYPHILIS.

BY A. B. JACKSON, M. D.

From carelessness, neglect, or ignorance, the primary symptoms of syphilis are often not treated properly. The consequence is, that after some interval of time a train of symptoms will arise having characteristics quite different from those which preceded them. These latter manifestations are usually denominated "secondary," when confined to the tissues of the pharynx, or to the skin;—to the former as an ulcerative disease, and to the latter in some form of eruption—and as "tertiary," when the fibrous tissues and bones are the structures affected. There is not an absolute uniformity in the order of syphilitic manifestations, but it has been observed as a general rule, that after the primary disease has disappeared from the genital organs either through treatment or the vital efforts, and the inguinal glands have escaped inflammation or have passed through the various stages of bubo, the *throat* is the next to suffer in the onward course of the malady; a skin affection succeeds the ulceration of the fauces, and then the iris, the larger glands as the mammæ and testes, the muco-cutaneous membranes the tendons and white tissues about joints, the periosteum and the medullary membranes of the bones, until the entire "fluids and solids of the body are corrupt." To repeat, a certain order in the appearance of these symptoms has been observed, but we are not to fall into the mistake that this order is invariable; the cutaneous eruption may appear without any throat difficulty, or the former may precede the latter, and continue in connection with it; a mamma or testis may become enlarged from infiltration before other constitutional symptoms have appeared; and pains in the bones have sometimes been the first indications of an internal syphilitic taint.

With many, it has been a question whether constitutional syphilis is ever transferred by sexual or other contact from one individual to another. Some contend that the virus must be absorbed from a local sore,—chancre or bubo—or be transmitted hereditarily from parent to offspring; and that the disease is communicable in no other way. Others, and among them are the most accurate and experienced observers of the present day, give it as their opinion and support it by numerous examples, that one person afflicted with constitutional syphilis, having no chancre or sore whatever, can contaminate another individual with the same disease. Certain it is, that a child born of syphilitic parents, will, when allowed to nurse a healthy woman, vitiate her constitution with the malady in question. Cases of this kind are too well substantiated to admit of challenge. One of the most striking of these cases I will relate. Mrs B——— of Worcester County, Mass., died soon after giving birth to an infant. The child was carried to a woman in the country to be nursed. This woman who acted as nurse, had a child of her own which she suckled, but being poor and having an abundance of milk, was induced by pecuniary considerations to accept the charge of the little orphan. In a few days the right breast, the one suckled by the adopted child, began to be fissured about the nipple; the mammary gland hardened and increased in size, and the axillary glands became tender and swollen. At the expiration of five weeks the orphan child died, its body bearing marked symptoms of "*Scrofula*," or syphilis of the constitutional variety. There were warty excrescences about its anus, its buttocks were the seat of several chronic abscesses, it had a constant snuffling at the nose, and a copper colored eruption upon its skin. Upon the death of the pocky child the other nursed on both sides, and was in three or four weeks affected with an eruption similar to the one observed on the orphan's body. At this juncture the mother took her child to the city for additional medical advice, as the family physician had expressed himself as confounded with the case. She now obtained the first intimation of what the disease might be, and began to take small doses of iodide of potassium, alternating with sulphur. At this time she had several deep fissures at the angles of the mouth, and had been unable to reduce the lumps in the breast, or keep the cracks and excoriations around the nipple healed, though she had used several unguents for that purpose. After taking the medicine a few days, she observed an eruption upon her body which was pronounced by several physicians to be syphilitic. And what renders the circumstances still more startling, the husband had a syphilitic throat, condylomatous tumors about the anus and genitals, and eventually died of the disease and the treatment.* The mother and child fully recovered after a few months of medication. Upon inquiry it was ascertained that the parents of the child which died were both affected with venereal disease, during its uterine existence; and there never was any ground for suspecting the husband or wife where the child went to nurse, as they had resided for years in all the simplicity of the purest country life.

At this point of the subject it becomes necessary to inquire what *medium* served to convey the virus from the venereal child to the

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*He utterly refused to receive any advice or medicine but from the family physician, who insisted in literally feeding his patient upon *blue mass*.

nurse, and from the mother to her child, and to her husband. The common impression is that the infectious qualities of syphilis exist only in pus—the purulent matter of chancre and bubo—but in the cases cited we must look for other means of transference. Undoubtedly the saliva of the tainted child served as a vehicle in the passage of the virus from the infant to the nurse; and she in turn may have given it through the same medium to her own child. And we are left to suppose that the husband was contaminated during coition. Evidence is wanting that the pus of a chancre will when applied to the sound skin, be absorbed in sufficient quantities to poison the individual, yet it is quite certain that the virus of a syphilitic sore may be introduced through the sound mucous membranes by the common absorptive process, which in the article on "Bubo" in a previous number of this Journal, was called *physiological.* Now in many of the *mysterious* cases, as they are called, which so often present themselves, have we not sufficient grounds for supposing that the saliva and other fluids common to mucous membranes, may serve as vehicles for the transmission of syphilitic poison from one individual to another, producing what may be called secondary or constitutional symptoms? I know this is contrary to the doctrine of John Hunter, who said that "a *secondary* venereal affection was incapable of originating the disease in another person," but men of great experience and unquestionable ability are liable to fall into the error of supporting erronious notions. Mr. F. C. Skey, who now stands high among English surgeons, dares to say, calling Mr. Hunter the great "Lion" of our profession, "in my humble judgment his book on the venereal disease has done an infinite deal of mischief." Mr. Colles of Dublin, remarked; "There is an occurence I have more than once witnessed: You are aware that children may be born with the venereal disease; an infant comes into the world covered over with a full crop of eruption, the venereal character of which cannot be mistaken; suppose that infant given to a healthy woman to nurse, *that woman* by suckling such a child will get a venereal sore on her nipple—this, if neglected, will be followed by a venereal eruption, by ulcers or other venereal affection of the throat, or any other secondary symptom. To put the matter still further beyond doubt, there is one other result that may follow this infection of the nurse by the diseased infant, it is a very extraordinary one I admit, but still one that cannot be questioned—namely, that although she may not have complained of anything wrong about the pendendum, yet if she should have connection with her husband ateuistime, sh will give him the venereal disease." Mr. Colles refers to several cases to make good his ideas of the communicability of constitutional syphilis, among which is the following: "A young surgeon in this city was paying his addresses to a young lady, to whom he was shortly to be married; he had some secondary venereal symptoms about him, and one of them was a secondary syphilitic ulcer on his lip, by means of which in kissing each other, the young lady got a venereal ulcer on her lip. I used to attend some of the family on extraordinary occasions, and was called in this case, and found out that the young man who had communicated the disease was trying to cure her without leting the family know what was the matter with her—and she unfortunately lost her life through the haste with which he threw in the mercury. If one has secondary venereal symptoms, and gets a child, that child will be diseased. Mr. Hunter believed firmly in the identity of gonorrhœa and the matter of chancre; from what I have before said you know my opinion on that head; I believe few, if any, surgeons of the present day consider them the same disease." Were either authority or evidence conclusive on this subject it would not be difficult to adduce more of such testimony; but unfortunately the disease prevails amongst persons not the most truthful or trustworthy in the world, and the most rigid observers may, therefore, be deceived.

Dr. Wm. H. Porter, Professor of surgery in the Royal College of Surgeons of Ireland, in the *Dublin Quarterly Review* for Feb., and May, 1857, advances the idea that the seminal fluid may be the medium of contamination without the intervention of a single particle of purulent matter. In an array of cases he says, "I have observed enough of them to establish as a law of syphilis that *the semen of a diseased man deposited in the vagina of a healthy woman will by being absorbed, and without the intervention of pregancy, contaminate that woman with the secondary form of the disease, and that without the presence of a chancre or any open sore either on the man or woman.* I have the satisfaction of knowing that some practitioners of undoubted ability and great experience fully concur in this opinion." Certain it is that by some mysterious influence, as mysterious as the law of hereditary transmission, the fœtus *in utero* may be poisoned by syphilis in the blood of the father and mother, though not a suspicious symptom be manifest in either. The adult bodies have seemingly become so accustomed to the virus that they allow it to "course through their natural gates and alleys" without taking cognizance of its presence. But alas for the fruit of such bodies; the child ceases to move a few weeks before its anticipated exit into the world; and after lingering as if to repollute the source from which it sprang, it comes into the world a putrid mass. But the offspring of such lepers may survive its birth, and be apparently healthy, yet in the course of a few days the virulence of its system will show itself; the little creature will pine and refuse to nurse; it will scream continually but in a weak and raucous voice; it snuffles as if affected with a severe catarrh, and the attendants will suspect the little one has taken cold; the angles of its mouth become fissured, and a copper-colored erruption makes its appearance on various parts of the body, and especially about the nates and genitals; the child's features become shrivelled, and assume the appearance and expression of premature old age, and it sinks and dies without our being able to administer to it any relief. In many instances the fond parents may endeavor to console themselves that their little innocent was quite too pure for earth; and spiritually considered, we would not be so irreverent or unkind as to deprive them of the consolation the sentiment might afford, yet, as an able writer has said, "the simple truth in relation to the material body is, that it is too corrupt for remaining on the earth."

Of the various ways in which constitutional syphilis may extend itself I have mentioned but few; and these have mostly been adduced to set aright those who blindly follow the dangerous doctrine of Hunter because he had "grown so great;" and to call in question the teachings of another "Lion" in the profession, who has been for years so authoritative from his position that no man dare believe what he did not, nor investigate what he had left untouched. I refer to Ricord, who has made the medical world subscribe to the theory that the transferable syphilitic virus resides only in the early formed matter of a chancre.

Unless the laws of venereal diseases be well understood, the erroneous opinion of the physician may become the cause of the most aggravated of domestic troubles; and allow innocent parties to suffer to "the third and fourth generation" when such a calamity might have been avoided.

In a medico-legal point of view these questions in regard to syphilis become every day more interesting. Suits for divorce on the ground of inconstancy may be begun when the guilt of the parties was in contracting the disease long before the nuptials. Nurses may take venereal from children, and innocently communicate it to their husbands, yet be wrongfully accused of inconstancy.

ANODYNES APPLIED TO NERVES BY ELECTRICITY.

BY W. A. THOMSON, M. D.

In your April number you notice approvingly the fact that Dr. Wood of Edinburgh, has successfully applied anodynes by bringing them into contact with nerves, by means of inserting tubes into the tissues. I propose that the contact should be effected by means of electricity. This agent in passing through animal tissues will carry iodine along with it, so as to color a solution of starch in contact with the opposite pole of the battery. Why not send anodynes forward after the same fashion? A tube with a cap-shaped mouth might be attached to the conducting wire from the zinc of the galvano-magnetic apparatus; the cap to be filled with the anodyne liquid, and pressed upon the tissues (previously denuded of cuticle if required,) complete the circle as near as possible on the opposite side of the nerve, and go to work. I think it very probable this would be effective, and with much less pain than would be caused by boring a hole and inserting a tube. I think also that if found effective at all, it would be more applicable to superficial nerves which are mostly those affected in neuralgia. I intend trying this, but not having the opportunity just at present, I should be glad to find myself forestalled by some of your correspondents.

TONICS.

BY PROF. C. H. CLEAVELAND.

In the definition of the word *Tonic*, writers on Materia Medica, and Therapeutics, have found more difficulty than with almost any term applied to medicines. All modern writers on therapeutics and materia medica who have named their orders of medicine from their physiological or therapeutical effects, seem to have felt the necessity of making a class of those which are used for the purpose mainly of imparting increased vital power to the system without the intervention of any immediate or marked change in the function of any organ. Such agents as do this have by some been called *Tonics*—hence Dunglison in his Medical Dictionary defines tonics to be; "Medicines which have the power of exciting slowly and by insensible degrees the organic action of the different systems of the animal economy, and of augmenting their strength in a durable manner."

In his "Materia Medica and Therapeutics," the same author defines tonics to be: "Agents, which give strength and vigor to the body:" and farther says: "In this point of view, *all* strengthening aliments might fall under the division. These are, in reality, tonics; but as before observed, the consideration of aliments is not in the object of this work."

In the further consideration of tonics, Prof. Dunglison uses the following words: "It has been a question occasionally agitated by therapeutists, whether there any such thing in nature as a *real tonic*, or in other words, whether any remedial agent, can by virtue of properties inherent in it, communicate tone, where tone is defective. It would appear, that no such properties are possessed by any agents."

Dr. A. T. Thompson classes tonics and astringents together, and styles them, "Vital agents, influencing the body generally by operating directly on the muscular and the sanguiferous systems." In another place he says that tonics, "act on the vital principle through the medium of the nerves, and as far as their mode of operating is understood, we may regard them as *excitants*."

Eberle in his therapeutics, says: "Tonics are medicines which impart vigor and tone to the system without materially increasing either the heat of the body or the frequency of the pulse."

Prof. Wood in the United States Dispensatory, says: "Tonics are medicines which moderately and permanently exalt the energies of all parts of the frame, without necessarily producing any apparent increase of the healthy actions."

Dr. Parris agrees with Sir Gilbert Blane, that tonics are medicines which will act on muscular fibres so as to produce a *shrinking* of the fibres of the muscle on being cut across, and as these medicines will restore muscles which have lost this contractile property, and impart to them tonic contractility they are entitled to the appellation of *tonics*.

Dr. Thompson, already referred to, seems to have had a very similar idea, for he also said, "Medicines, or medicinal agents, which produce this state of healthful tone, and renew *the tension* and vigor of the muscles they are thence denominated tonics."

Pereira, very briefly defines Tonics to be; "Agents which increase the tone of the system." He also quotes from Dr. Billing, that, "Tonics are substances which neither immediately nor sensibly call forth actions like stimulants, nor depress them like sedatives, but give power to the *nervous* system to generate or secrete the nervous influence by which the whole frame is strengthened."

Dr. Chapman of Philadelphia says that Tonics, "like every class of medicines, are endowed with some properties peculiar and destructive, among the most conspicuous of which is their specific affinity to the muscular fibre."

Pereira says: "Tonics *give* strength; stimulants call it forth."

Dr. Billing says: "The term Tonic is applicable to all those medicines which cure chronic *inflammation* without being stimulant, or directly sedative, or depletory."

Dr. Duncan classed as tonics, "Those medicines which produce no immediate obvious effects." Voge styles tonics, "Those medicines which operate specially on irritable life."

Dr. Ballard stated that tonics act first upon the nerves, and through them on the muscular system, and considered them to be stimulants.

Dr. Headland in his Prize Essay, thinks Dr. Billing not far from right in his definition, but accepts it in a modified sense, as he considers that the primary action is on the blood.

Such, and so diverse are the opinions expressed by different writers as to what are tonics, and how they act on the system. As it is in accordance with my plan to be as definite and plain as possible in the classification of medicines and the use of technical terms, the word tonic by me is confined in its signification to *that bitter principle* of plants, *which is not possessed of cathartic*, *or other immediately manifest property*, except tonic power. In other words: *Tonics are defined to be the bitter* TONIC *principle of vegetables.*

This definition very nearly accords with one given by Prof. Dunglison after he expressed the doubt of the existence of such a class of agents, for he said; "Bitter extractive appears to be the great *tonic principle* of most vegetable tonics." Dr. Chapman, Dr. Parris, and others have seemed to entertain the idea that bitterness is essential to the tonic principle in vegetables: and Dr. Cullen directly asserts that the tonic and bitter principle of vegetables are identical. Dr. Parris says that bitter extractive is a great natural tonic; and Mr. Sinclair, the gardener to the Duke of Bedford, in his *Hortus Gramneus*, conveys the idea that no cattle will thrive upon grasses that do not contain some of the bitter principle; and that sheep fed on yellow turnips, which contain but a very slight amount of this bitter principle, will instinctively seek for and greedily devour bitter herbs, and if they cannot obtain the bitter principle, they will sicken and die.

The customs of all nations from the earliest recorded time, would indicate that the *instincts* and experience of the people taught that the bitter tonic principle in certain quantities is necessary for the continuence of health; and there is some good physiological reason why the populace should drink of the infusion of bitter herbs at the close of the long winter season when they had been prevented from the use of the green plants.

The bitter tonics are natural to the blood in some form, and when the digestive functions have been deranged by disease, the system will have sustained a loss of the principles which enter into their combinations. Hence tonics are administered during convalescence after most febrile diseases to act as Restoratives. They are useful also in nearly all conditions of *debility* of the stomach and digestive apparatus, when that apparatus or any part of it is not laboring under any active inflamatory affection. As most of tonics are alkaloids, or at least neutral principles, they act on the system *as positive electrics.*

In support of the idea that tonics exert a part at least of their curative power in debility, from their being positive electrics, the opinions of those writers (who are greatly in the majority among moderns,) may be cited, who say that all tonics act as *stimulants* to the healthy subject. This fact, which appears well established, may, however be explained by supposing the tonics, as their present classification would indicate, to be simply *Restorative Hœmatics.*

It would seem to be conceded by all that tonics *do* restore a something to the system, in debility, which something is needed to be added to the system to bring it to the standard of health, but the authorities herein quoted furnish but little aid in determining *what* that something is. By ascertaining what elements are to be found in tonics—what part of the system demands the restorative, and *how* the elements can supply the want—this vexed question may be settled.

If we find that they not only supply the material needed to bring the system back to the normal standard, but that at the same time they neutralize or remove the *cause* which induced the debility, the mode of explanation will not be changed, but simply extended so as to embrace both powers.

Many have confounded tonics with Anti-periodics—styling nearly all the bitter tonics, *anti-periodics*, and saying that all anti-periodics are tonics. This error was scarcely avoided by Headland in his admirable Prize Essay on the "Action of Medicines" although he afterwards spoke of Arsenite of Potassa as among the most powerful catharetics of the miasmatic poison.

If we cautiously separate the Restorative properties of agents from the Catharetic powers, we shall find but little difficulty in perceiving that many of the bitter plants may be able to act as restoratives when the material they furnish is demanded by any organ, and at the same time, the same, or another bitter principle, of the same plant might combine with the miasmatic emanation which produces periodic diseases, if any of this priniciple should be lodged in the system where they could come in contact. But we need not assume that there is certain identity between the miasmatic principle of plants, for there are several of the plants that are intensely bitter, which while they are valuable tonics, do not seem to destroy the cause of ague; and there are others which act with considerable force to destroy the ague poison in the system, and yet are possessed of no great amount of the bitter principle.

Of those which are very bitter, and yet possess no anti-miasmatic property, are the willow, and its neutral principle, salicine, gentian, paullinia, calumbia, hydrastus canadensis, calandine, lupuline, cusparia, angustura, chiretta, menyanthes, chimaphila umbellata, wormwood, tansy, and many other plants; and among those which are slightly, or not at all bitter, are piperina, phloridzine, the leaves of the Indian corn, (*Zea Mays*,) the seed of the common cotton plant, and many others. These are all anti-periodics but not tonics.

There are still others which doubtless have been very useful in the treatment of periodic diseases, and even ague and fever, and have quite a reputation in that class of derangements, which have left some doubts in the minds of many acute observers, as to their possessing any directly catharetic effect on the primal cause of the periodic disease. This latter class not only includes the bark of the willow, but also quassia, gentian, columbo, cherry bark, chamomile, and cascarilla, but many other vegetable products that are intensely bitter, and yet that bitterness is not the *catharetic* bitter principle found in colocynth, aloes, and other purgatives.

Although these vegetables named do sometimes cure ague and fever, they appear to do it, not from any catharetic power over miasm, but simply by supplying to the system a substance needed to bring it into the highest state of normal activity, and then the natural action of the vital forces either control and keep under the miasmatic influence, or the active organs may succeed in expelling it from the system unchanged.

When the system is possessed of a large amount of vital stamina, it can for a long time bid defiance to the invasion of miasm, but when its powers have been reduced, it is no longer able to counteract the poison, and diseased manifestations will ensue. If we restore by means of tonics, that which the system has lost, it may again master the disease and health will be the result. There can be no doubt that in this way many bitter tonic plants have acquired the reputation of being anti-periodics. A reputation entirely unfounded, as they never destroy the cause of the disease, but raise the system above its influence. Hence it is that the attempt to get a substitute for quinia among our tonics has entirely failed, and only bebeerina, and its sulphates, and phloridzine which closely resemble quinia in their chemical constitu ents, have attained and sustained any lasting reputation as positive anti-periodics.

Still it must be admitted that there is a very close affinity between tonics and anti-periodics; and perhaps future investigations may prove that the bitter principle of the bile, which is an excellent tonic, is also among the most powerful of our anti-periodics, and that the miasmatic poison never accumulates in the system in sufficient quantities to produce ague and fever, until the liver has become so deranged that it does not secrete the necessary amount of normal bile to neutralize and destroy this poison; or until the tonic within the system has been exhausted, and not a sufficient amount of the bitter tonics have not been taken with the food or drink to supply the loss.

If we can discover what elements are to be found in tonics, and why it is that the system needs to be supplied with those elements, we shall come near defining physiologically, *what it is that constitutes an agent a tonic*; and also the action of these agents on the system in health and disease, as well as when their administration will be demanded.

To the inquiry as to what part of the system we are to look for elements resembling the tonics, the investigator naturally turns to the blood for an answer; and not to the nerves, for they do not act in any regard as do those medicines whose primary impression is upon the nervous system.

All Neurotics are rapid and somewhat transient in their action.

Hæmatics, are much more slow and permanent in their effects.

A Neurotic does not produce any apparent permanent change in the blood, and soon passes out of the blood, because it is not natural there.

Hæmatics change the condition of the blood, and remain in it, because they are natural to it, and when that fluid is normal, the elements of all restorative hæmatics are always found there in certain proportions.

Neurotics, being transient, seldom have any permanent effect on chronic diseases, but their transient impression may be of the most powerful nature.

Hæmatics being slow in their action, but durable, do not produce any very perceptible immediate effect, but as they add something to the blood which should be present in that fluid in its normal state, their effects are most manifest in sub-acute, or chronic diseases.

From an examination of these propositions, it will be perceived that those authors who have styled tonics *Neurotics* could not have had a very clear idea of the distinctive characteristics of these two classes of medicines.

The conclusion then is inevitable that tonics are Restorative Hæmatics, and as such will produce no marked effect on the system in health, except that their presence is felt as a foreign substance which the system labors to expel; and it is this effort for their expulsion which produces the phenomena of light excitement of the circulation and the feeling of fullness and tension about the head and face, which has led to their being styled stimulants.

As tonics restore a principle to the blood, we have to decide what it is whose place they are destined to supply, or into what they are manufactured to subserve the natural demands of the animal economy. It has been observed that tonics are demanded during convalescence, after the system has suffered from some form of acute disease, during which the digestive apparatus has been so deranged that no large amount of nutrition has been received, and all thet issues have suffered waste beyond what has been restored to them. When this is all they have suffered, the demand for the bitter principle of plants is no greater than for the other proximate principles, and the animal or vegetable food taken may furnish the amount needed to supply the demand. Many vegetables that are not usually called bitter, possess a small amount of the bitter tonic principle, and hence impart it to the system; and nearly all wild animals, and such of the domestic tribes as are not stall-fed, are constantly eating herbs containing this same tonic bitter extractive, so that the flesh of game and of sheep or kine not stall fed, are found far more serviceable and palatable during convalescence than exclusively farinaceous food; and as tending to a far more speedy restoration to positive health.

But when the liver has been seriously implicated in the disease, or when not only has the appetite been reduced or nearly destroyed, but a large amount of the bile has been wasted by being vomited out of the stomach, or purged away with the stools, as in some forms of fever and diarrhœas and dysenteries, then we find that this great loss cannot quickly be supplied by the food, and tonic medicines are found to be of the greatest service.

As, sometimes the mercurials and other Chologentic medicines are given so freely as to lead to a copious flow of bile from the system, which is also expelled from the intestines by cathartics or emetics, we may examine the philosophy which underlies their administration, and at the same time endeavor to trace the action of a tonic after entering the circulation, and we shall find that purging off the bile is not in accordance with true philosophy or true therapeutics.

Leibig has clearly pointed out the close chemical alliance between the bile and tonics, or rather between one constituent of that compound product, Taurine, and all such pure tonics as have been submitted to careful chemical analysis. The most important constituents of the bile are a fatty substance which will not combine with the alkalies to form a soap, Cholesterine; a neutral substance called *Taurine*, the substance with which we are at the present more interested; an acid called choleic, united with soda, which is in excess, and gives to the whole fluid an alkaline character; a small amount of iron, and the peculiar coloring matter of the bile.

The peculiar *bitter* of the bile seems to reside in the taurine, and perhaps I may succeed in proving that the taurine is formed out of the bitter extractive of plants, and that the bitter extractive is taken into the system for the purpose of being made into taurine. The use of taurine, may be considered after the primary proposition, has been established.

The chemical composition of taurine has been stated by different analytical chemists to be C_4 H_7, NS_2, and from O 2 to 7; the main difference in their analysis being in the amount of oxygen present. Headland leaves out the sulphur and gives as his formula; C_4 H_7 NO_{10}.

It is particularly worthy of note that the tonics in their most pure state, closely resemble taurine chemically. Those bitters which are cathartically anti-miasmatics are more nearly allied to taurine than those which do not possess that power; and hence the inference is natural that tonics may be converted into anti-miasmatics by the operations of the liver.

By comparing the formula given for taurine, with the following of some of the anti-miasmatics and tonics, the analogies of these agents will be perceived at a glance. Quinia is composed of C_{20}, H_{12}, NO_2.

The sulphate of quinia has the following, (C_{38}, H_{22}, N_2, O_4, HO_2,) 3 S O 3+16 HO.

Bebeerina is composed of C_{35}, H_{23}, NO_6. Sulphate of bebeerina is composed of B_{12}, SO_3. Salicine is composed of C_{26}, H_{18}, O_{14}. Phloridzine is composed of C_{24}, H_{16}, O_4. Liebig gave as the formula of the proximate bitter principles of tea and coffee, which he denominated caffeine, C_8, H, N_2, O_2: and then he proceeded, to show that an atom of caffeine, if it be added 9 atoms of water, and 9 of oxygen there would be found two atoms of taurine. As oxygen, and water, or the elements of water are always present in the blood, and as oxidation can readily occur there at all times, he came to the conclusion that something like caffeine was needed to be constantly supplied to the system, from which the liver might manufacture taurine, to supply the constant demand for that agent in the system.

The opinion which had formerly obtained with many physiologists, that the bile is an *excretion*, and naturally designed to be passed out of the system with the feces, is at the present time almost entirely discarded, as in health, no traces of it are to be found in the excrements, or at least of the bitter principle of it. The presence of bile in the feces, is now esteemed an indication of disease and treated as such. (See Collige Journal, *P* 22 *et seq:* and *P*49 *et seq.*)

While the error of considering bile to be an *excretion* has been discarded by nearly all moderns, many of them have fallen into an error of not less magnitude, which recent investigations and experiments are clearly demonstrating as unfounded. The latter error is that of supposing that the bile is necessary to be added to the food, to aid in its digestion. That the bile *may* be poured into the duodenum, and pass into the circulation along with the aliment no doubt is correct; but that it *usually* is not thus poured out, or that the digestive process would be perfected without it, is demonstrated by the anatomical relations of the parts, and also by numerous experiments made by Brodie by Simon, by Tiedman, by Bernard, by Robin, by Berzelius, Theyer, Enderlin, Schlosser, Schwann, and other accurate and acute observers.

The evidence seems perfectly conclusive, both, that the bile cannot get with the food in the duodenum while that tube is fully distended, and would not aid in its digestion if there; but also that it is not excreted from the system in the form of bile. It remains then if possible, to explain what office the bile does perform in the system; and in examining this matter we shall find still farther close analogies both as regards the color, taste, and also the action of bile, and the bitter tonic principle of plants; and we shall also discover that when the bitter tonic principle is not supplied, the liver cannot manufacture bile.

Nearly all writers on organic chemistry, say that "the natural bitter principle is of great importance; that it checks *fermentation.* It is usually of a pale yellow color, intensely bitter, and has no alkaline or acid reaction."

Carpenter says of bile: "The nature of its office may be partly judged of from what takes place when fresh bile is mingled with the product of the gastric digestion. The acid reaction of the latter is neutralized, by the alkali of the former, and a sort of precipitation takes place, (as was originally noticed by Dr. Beaumont,) in which certain constituents of the bile fall down, and in which also according to M. Bernard, the albuminous matters that have been dissolved and not yet absorbed, are for the time rendered insoluble, leaving the saccharine matters in solution, and the oleaginous floating on top. The admixture of bile with chyme seems further to have the effect of *checking destructive chemical changes in its composition*, for M. Bernard found that when two similar pieces of meat had been immersed for three months, one in a bottle of gastric juice alone, the other in a mixture of gastric juice and the bile, a strong ammoniacal odor resulting from decomposition was emitted from the former, whilst the latter was pure and free from any smell whatever.

And it was remarked by MM. Tiedmann and Gmelin, that when the bile was prevented from passing into the alimentary canal, the contents of the latter were more fetid than usual. Moreover, it is found that the admixture of bile with fermenting substances checks the process of fermentation; and M. Bernard has shown by ingeniously contrived experiments, that this antagonistic power is exerted also in the living body. Hence we can understand how the reflux of bile into the stomach should seriously interfere with the process of gastric digestion; and how, when there is a deficient secretion of bile, or more food is swallowed than the bile provided for it can act upon, or the character of the biliary secretion itself has undergone any serious perversion, there should be a much larger amount of the putrefactive fermentation than is normal, as is indicated by the evolution of flatus, and very frequently by diarrhœa. Further, the want of proper neutralization of the gastric fluid will cause the continuance of acidity in the contents of the intestinal canal, which in its turn, induces a state of irritation of its mucous membrane, and a perversion of the secretions."

If, however, we admit as proved, that the bitter principle after being converted into bile, is possessed of anti-putrefactive properties, we can readily understand how animals supplied with food that does not very easily take on the putrefactive process, may have the supply equal or exceed the waste, so that they may live months and years without any apparent need of the anti-putrefactive agent; and also how they may present symptoms of wasting or inanition where the balance is no longer maintained and the loss exceeds the supply. The experiment of removing the liver would not be a fair test as to the uses of, and need for the bile, for that great organ subserves other and more important purposes in the animal economy than the minor one of manufacturing bile out of bitter tonics.

The bitter tonics are of use to the system even before they are changed into taurine, for they do not require to have passed that change before they become capable of preventing putrescence. It is this anti-putrescent property which renders bitter herbs, or the expressed juice of bitter herbs, of value in cases of bruises, sprains, hurts, and injuries of any kind where there is rupture of blood-vessels and infiltration of blood and serum, or of lymph, or any substance which may undergo destructive chemical changes. The value of this class of agents is perhaps never more marked than in puerperal peritonitis and metritis, and cases of extensive and severe bruises. The same property it is in part, which renders yeast of value when applied externally or internally in gangrene, or a tendency to a gangrenous condition. It also prevents the yeast itself from passing into the putrescent state, although it does not prevent that peculiar chemical change which is necessary to the progressive decomposition which changes the gluten into sugar, and the latter body into carbonic acid and alcohol. While it does not prevent these changes, it does not aid them, and it *does* prevent the rapid and great change of all the compounds and their reduction to their ultimate elements which we define by the term destructive fermentation, or putrefaction.

In the same manner, and by the same power, the bitter extractive of plants which is called the tonic principle, when it is in the blood, does not prevent the formation of compounds out of its elements; but it *does* in part prevent the putrefactive ferment which that compound fluid readily undergoes when out of the system.

As a little leaven may leaven a large quantitiy of meal, so in the animal economy a little of the principle generated by putrefying animal and vegetable bodies, may impart a tendency to similar changes in the system, and the true catharetic anti-miasmatic medicine, of which the bile is the representative, no doubt meets the poison, and changes it into a harmless mixture, and thus *prevents* the change by destroying the cause, as the bitter principle prevents putrefaction of meat, in the experiments given.

It may be that the reason why quinia, and beeberine, and phloridzine are such powerful anti-miasmatics, is because they are capable of exerting such a control over the miasmatic poison, (which is the product of a process of decomposition, and tends to generate putrid diseases,) to prevent it from inducing changes like those by which itself was produced. Ague occurs in those whose livers have become somewhat exhausted or diseased, or debilitated from not being supplied with the proper amount of the bitter preservative principle; or in those whose whole system is suffering from the want of this restorative. Headland remarks:—

"Some diseases may be cured in two ways; either by the supply of something, or the neutralization of something else. And it is not repugnant to what we know of ague to suppose that there is in it a want of some natural material, which would have, when present, the effect of checking the operation of the morbid agent. The fact of having had ague once does not as in the case of eruptive fevers, protect a man from the disorder henceforward. So in this sense all persons may be said to be liable to ague, and none protected from its assault. But it is not the case with ague as it is with syphilis and small-pox, which diseases most persons inevitably catch who are exposed to the virus for the first time in their lives. For, of a number of persons exposed to the same miasmatic influence, only a part take the disorder; some escape.

"It is generally found that those are most likely to take it who have been previously debilitated by any cause, so that we must suppose the rest to have in their blood some material which serves to prevent the working in it of the ague-poison, which apparently must enter it."

From the foregoing, I conclude that tonics are Restorative Hæmatics, designed to supply the system with the principle normally present in the blood, and which possesses great power to prevent putrefaction or fermentation in that heterogeneous fluid; and that when tonics act as anti-miasmatics, they do so, not from any catharetic, or destructive property they possess, but because of properties directly the opposite of catharetic or destructive, properties which are directly *anti-septic.*

But tonics appear not only to possess these properties, which enable the system and the blood to *resist* any change of a putrefactive nature, but as has been shown, they are not only when out of the system closely allied to the bitter anti-miasmatics, but they are all of them capable, when in the system, and by the action of the liver, of being transformed into taurine, the bitter principle of the bile, which chemically bears a very remarkable resemblance to the vegetable anti-miasmatic principles. When treating of this matter, Headland uses the following language:—

"This similarity admits of a farther and more direct application. It is ascertained that many, if not all, of the diseases in which quinia and its kindred medicines are found to be of use, are connected with a derangement of the secretory functions of the liver. One of these diseases, is the debility which is consequent upon typhoid and other fevers. In these fevers the function of the liver is always more or less interfered with, though more obviously in some cases than in others. In strumous habits, in which generally bark is of signal service,—and very strongly recommended by Cullen, Fordyce, and others, there is commonly a peculiar degeneration of the liver, which has been ably described by Dr. G. Budd. This state is distinct from the fatty enlargement common in phthisis, in the early stage of which quinia is also very serviceable. Quinia is often beneficial in gout, in which the liver is more or less deranged.

Turning to periodic diseases, we find that impaired hepatic functions are the rule, and the absence of such disorders, the exception. This will be at once admitted in the case of dysentery, and the remittent and yellow fevers of the tropics. It is, also, true of ague. It seems even likely that the enlarged spleen may be partly caused by an obstruction to the circulation in the liver. This affection of the spleen is not uncommon in other liver diseases. In typhus fever both the spleen is disorganized and the liver deranged.

It is observed in tropical countries that severe forms of remittent fever frequently pass into continued fever, which seems to point to some analogy between the two. Ague even may pass into typhoid fever. And I have already referred to the fact that quinia has of late been strongly recommended in the treatment of continued fevers in general. Dr. Watson states that in New Zealand the biliary functions suffer so much in the intermittent which occurs there, that it is known among the inhabitants by the name of the "Gall-fever."

It has been proved that there is great chemical similarity between the tonic bitter extractive, and the taurine of the bile, and that the taurine is designed to be absorbed into the blood. It has also been proved these bitter medicines cure diseases that depend upon derangement of the hepatic functions—and that in those where the hepatic functions are most impaired, as in periodic fevers—those medicines, as quinia, phloridzine, and beeberina, which most closely resemble taurine, are found the most efficacious.

The establishment of such facts would suggest the probability that these agents are useful by actually supplying the place of taurine in the blood, and that it is thus they also *prevent* the ague-poison from so acting as to cause disease.

In this way doubtless can we reconcile the statements of those who have found blue-pill, and other mercurial preparations of value in ague, as well as in diarrhœa and dysentery, or in remittent or yellow fevers. If the liver has been torpid, any medicine which will stimulate it to action, by increasing the flow of bile, would be found useful in-so-far as it would lead the liver to supply through the bile the principle demanded by the system to prevent the destructive decomposition of any part of the system. If there were no unpleasant effects to be feared as the results of the administration of the mercurial, and we were also sure that the deficiency of the bile was owing simply to a torpidity of the liver, the mercurial medication would prove exceedingly satisfactory; but the unpleasant effects which might be produced by the medicine are many, and the system could far more safely be restored by supplying to it directly in the form of medicine, the agent required.

To sum up the results obtained, we may say: The tonics are the bitter extractive of plants.

Tonics are useful, when in the system;—*first*, To supply to the system an anti-putrefactive principle which prevents the blood and the tissues from undergoing the putrefactive process which their compound nature leaves them peculiarly liable to undergo;—and *second*: To supply to the liver the proper material out of which it can manufacture bile, which while it acts also as an anti-putrefactive agent, is and possessed in addition to this, of a catharetic property by means of which it unites with, and neutralizes those products of putrefaction which the system may have absorbed from any source.

And, inasmuch as the system is liable to be constantly receiving the products of animal and vegetable decomposition, and consequently is constantly demanding a new supply of the catharetic principle, the liver is as constantly at work manufacturing taurine to meet this demand. If the liver be diseased and unable to change the tonics into taurine, or if the amount of miasmatic exhalations exceed the amount of this neutralizing principle; or, if the material of which taurine is manufactured, (the bitter extractive of plants,) be not furnished to the liver in a sufficient amount to enable it to manufacture the proper quantity of taurine, then the system must suffer.

When the deficiency is from want of material, the administration of tonics will remove the difficulty. When the liver is diseased and in fault, we must endeavor to supply the system with agents requiring as little change as possible; and if a catharetic is demanded, one should be selected, usually, which is in its chemical constitution nearly allied to the taurine of the bile.

It will be perceived that the distinction between the Tonic and the Anti-periodic, like quinia, consists in this:—That the tonic acts on the blood to *prevent* change in its constituents;—and that quinia not only acts on the materials of the blood and the tissues to prevent their undergoing putrefaction, but that it and beeberina, and phloridzine, like taurine, also act directly on the product of fermentation and unite with it, losing its chemical and physical character, and that both these are excreted from the system.

The tonics act in the blood, as tonics, to prevent decomposition, and are then manufactured into taurine, and when so manufactured are capable of being changed and excreted from the system.

If this explanation be correct, it will be perceived that tonics never act as cathartic anti-miasmatics; and also that the anti-miasmatics, being readily changed by the presence of the product of putrefaction, never act on the blood as tonics;—not that they do not prevent putrefaction, for they do that, but because they so readily are changed and carried out of the system.

Some have confounded the Chalybeates with the Tonics, but if the explanation here given of the action of tonics be correct, they never act upon the system as the preparations of iron do, and can never take the place of chalybeates. So, also, if the explanation given in the January number of the College Journal for 1857, of the action of iron on the blood, be correct, and in regard to this there is no diversity of opinion in the profession, the iron preparations never act on the system as tonics do. It has been thought proper to present this matter at some length, in order to make clear a subject on which even the authors of works on Therapeutics have not appeared to possess distinct and definite ideas.

ESSENTIAL TINCTURES.

BY W. S. MERRELL, A. M.

Note.—Mr. Merrell, who is already well known to the profession by his improvements in Pharmacy, as well as by various contributions to its literature, through the former editions of The American Eclectic Dispensatory and the Journals, has recently announced a new hypothesis in regard to the isolation and preservation of the medicinal elements of vegetables. We have, as yet, not had time to examine into and test the truth of these views to their full extent, and hence do not choose to give them our endorsement; but their accuracy in some regards, together with their importance, if true, has led us to present them to the readers of the College Journal.

The following article was prepared for the New and Revised Edition of King's American Eclectic Dispensatory, now being printed, and has been furnished for the Journal by its author, and the kindness of Prof. King. Mr. Merrell says :—

I hold that it is a law of organic chemistry, extending with few if any exceptions, to all those proximate principles which are the direct products of vegetable and animal life, that pure ALCOHOL, in its solvent powers, discriminates between those elements which are *medicinal* or *poisonous*, and those which are either *nutritive* or *inert.* That all those vegetable and animal organic substances which are not nutritive, but which when taken into the stomach, or absorbed into the circulation, more or less disturb the normal action of the animal functions, are, when in their natural or unchanged condition, soluble in alcohol; all those elements which are nutritve or capable of digestion and assimilation, and those which are *inert* or act only mechanically on the animal economy, are nearly if not absolutely insoluble in that menstruum.

Thus in the vegetable kingdom the fecula, gum, gluten, vegetable albumen, pectine, glucose, non-medicinal fixed oils, and other analagous principles which are digestible and support animal life, and also the lignine, wax, caoutchouc, etc., which are inert, are all insoluble, or nearly so, in pure alcohol ; while all the *alkaloids*, (at least when combined with their own native acids,) the resinoids, and also resins, acids, and those fixed oils which are medicinal, are freely soluble in that agent. So also in the animal kingdom, the albumen, fibrine, gelatine, fat, etc., which are nutritive, are insoluble in alcohol; while all their peculiar secretions which are medicinal or poisonous, as musk, castor, the poison of serpents and insects, etc., and many peculiar secretions which are the result of disease, as the pus of small-pox, are soluble in that fluid. There may be some partial exceptions to this law but it is believed they are so few as not to militate against its general application.

It is not contended that it extends to all those numerous organic substances which are the results of destructive decomposition by heat, or other artificial means, but to those which are the products of either healthy or diseased life ; and it is with such chiefly that we have to deal in vegetable pharmacy.

It is acknowledged that there are many vegetable substances from which alcohol alone will not readily extract the medicinal principles; but this is not because those principles are not themselves soluble in alcohol, but because they are so enveloped in and shielded by other elements which are not soluble in it, as woody fibre, wax, fatty oils, etc., that it cannot reach them. They must therefore be first eliminated from such combination, so that this universal solvent of medicinal matter may come in contact with them. For this purpose we must employ water, dilute alcohol, ether, camphene, and perhaps acids and alkalies—all those appliances which pharmaceutic science and experience have taught us to use. But when once eliminated, and these first mentioned, mostly removed, they are then freely soluble in alcohol alone, and this to the exclusion of the non-medicinal matter first extracted with them.

Acting on this hypothesis I propose a new series of fluid preparations, very concentrated, definite, and unalterable, which it is believed will be superior in most cases to any other pharmaceutical preparations.

The general process for their preparation is as follows .

1st. If the plant or substance to be operated on contain any volatile oil, or other volatile elements, first draw these off and set them aside. This is best done, not by distilling *over* in the usual way, but by displacement with alcoholic vapor. The substance properly ground is put in a displacing vessel of convenient form, the lower end of which is connected with a cold receiver or condenser, and the top closed with a well fitted cover. Through an opening in this the *vapor* of alcohol from a separate still is driven *down* through the ingredients, and by an improved contrivance for the purpose, is *partially* condensed *in* them and thus passes out into the receiver, carrying with it all the volatile elements and much of the other medicinal principles in a very concentrated form. Continue this until the passing vapor contains little or none of the aroma of the plant, then change the receiver and set aside the liquid collected ;—this in general need not exceed one fourth the weight of the ingredients acted on, if the process is skilfully conducted.

2dly. Continue the displacing process with alcohol and water in turn or in combination, and if necessary with ether, or acetic acid, until all the soluble elements of the article are perfectly extracted.

3rdly. From the liquid so obtained, draw off by the still or vacuum pan, the menstrua employed until the extract is reduced to a *semi-fluid* consistence, leaving sufficient liquid to allow the alcohol which is to be next used, to come freely in contact with all the particles, and yet not enough to sensibly dilute that solvent.

4thly. Treat this semifluid extract with absolute alcohol, which according to the hypothesis advocated, will take up all the medicinal principles, and leave the nutritive and inert. In doing this, a small portion of the alcohol may be first employed, say in proportions of half a pint to each pound of the original materials under treatment, and this when decanted or filtered off may be added to the tincture obtained in the first part of the processs that contains the valuable principles, then wash the remaining extract with successive portions of alcohol until nothing more is dissolvod, and distil off the alcohol from those weaker tinctures till the remainder when added to the previously reserved tinctures shall make the volume desired; mix, and if any turbidness remains, filter the whole through paper.

In general, a convenient standard of strength for vegetable substances will be that now usually adopted for the Fluid Extracts in which each fluid drachm of the Tincture, will represent and contain all the virtues of 60 grains of the crude article, but many articles may be made to a still greater concentration if it is found expedient.

The above described process will suffiiciently illustrate the general principles on which these preparations are to be made, but this may in many cases be greatly modified according to the character of the substances treated.

It is claimed that solutions or Tinctures thus formed will possess the following advantages over other medicinal preparations.

1st. They will fully retain all the volatile elements of the plants or materials from which they are prepared, while in all the fluid extracts heretofore introduced, these elements are partially dissipated, and in the "concentrated powders" and solid extracts, they are almost wholly lost.

2dly. In those tinctures the Resinoid and oleo-resinous principles are all obtained and held in perfect and permanent solution, while in the fluid extracts where but a small part of the alcohol is retained, these principles cannot be kept in solution, and must therefore either be removed to the great deterioration of the medicine, or else remain to form a muddy precipitate in the bottle, or if kept suspended by sugar, to make the preparation turbid and repulsive, as is seen in many of the fluid extracts heretofore introduced. Our best manufacturers of fluid extracts are now *approximating* the ground contended for, by increasing the alcoholic strength of their preparations.

3dly. These tinctures will not only be clear and elegant, but when made from the most delicate and perishable substances, will not be liable to fermentation or decomposition, but wiil *keep* unaffected by *time* or *temperature*.

4thly. They may be made of definite and uniform strength or nearly so, although the materials used be not uniformly of prime quality.

For having made a sample of eligible strength from the best selected material, all subsequent preparations of the same article may be adjusted to the same strength by specific gravity, or by the quantity of residuum left on evaporation. This cannot be done in the common fluid extracts, as in them a great specific gravity and a large residuary extract may arise from the nutrient and inert matter present, with little or none of the medicinal elements.

5thly. In these tinctures the dose is so small that the alcohol present, which in the old officinal tinctures often forbids their use, here ceases to be an objection. When prepared from roots, barks, leaves, flowers, or seeds, they never need be of less concentration than that in which each *minim* of the tincture contains all the virtues of one *grain* of the material, so that the doses will seldom exceed thirty or forty drops, and of those articles used as sedatives and antiphlogistics rarely more than one to five drops, and the cases must be rare in which such quantities of alcohol can exert an injurious influence. But if any such influence should be feared, it is easily obviated. Such concentrated agents should never be thrown undiluted upon the stomach, but should always be diffused when administered, in lymph, water, gruel, or other suitable vehicle. Now if any injurious effect be feared from the small quantity of alcohol in the required dose, it is only necessary to mix it in such vehicle *warm*, and the alcohol is soon dissipated, and the medicine itself left in combination with the liquid.

6thly. These tinctures, containing as they do all the virtues of the plant separated from extraneous matter, and being of definite and known strength, may readily be diluted by alcohol into *officinal tinctures*, or be added to simple syrup to form beautiful and efficient *medicinal syrups*, or be evaporated to the pilular consistence and thus form most perfect and reliable *Alcoholic Extracts*.

As the terms "Fluid Extracts," "Saturated Tinctures," and "Concentrated Tinctures" have been appropriated to preparations heretofore known, and which are quite different from those here recommended, to avoid confusion it is proposed to designate these by the appropriate and easily spoken name of "*Essential Tinctures.*"

Messrs. Merrell & Co., are now proceeding to manufacture such mixtures from almost every article of the vegetable materia medica. Although the process of manufacture is much more difficult and expensive than that of the best Fluid Extracts, they propose offering them at about the same prices as are now charged for the most celebrated of those preparations.

DISEASE OF THE KNEE, AND RESECTION OF THE JOINT.

BY PROF. A. J. HOWE.

The knee-joint in common with the other larger articulations, is liable to a variety of lesions which have ordinarily received the name of "white swelling," from the peculiar pearly white color the skin assumes after the morbid action is well established. It is not to be understood that I am now referring to those acute difficulties which arise from a strain of the ligaments or pinching of the synovial membranes, injuries resulting in active inflammation and very properly get the name of "synovitis," but to a graver disease which comes on slowly, and generally terminates unfavorably; to a disease which has its cause in a constitutional cachectic habit or condition of the body; to a malady which has been designated synovial, cartilaginous, and osseous, exhibiting itself in the former by gelatinous degeneration, and in the last two by ulceration. To recount all the aberrating symptoms of this disease, and describe all of its various pathological appearances would require more words than would be read with patience. The disease bears the various names of "white swelling," "fungus articuli," "arthritis," and "hydarthrosis." The multiplicity of its appellations indicates the difficulty writers have found in selecting a term which should, to some extent, declare the nature of the disease. It is an affection which avoids alike the extremes of infancy and old age, and most frequently attacks patients between the ages of fifteen and thirty. The knee-joint is not always the one that suffers, but the hip, the elbow, the ankle, the vertebral and other large articulations may be the center of the morbid phenomena.

It has been intimated that the cause was from some constitutional predisposition or cachectic taint, and undoubtedly such is the case in a majority of instances; but a local injury, however trifling, may have been sufficient to call to the parts undue vascular and nervous action, and, as it were, to concentrate the elements of the disease which before coursed along the avenues of the body without a "habitation or a name." A person with a scrofulous, tuberculous, or vitiated condition of the body, receives a sprain or contusion of the knee, a low degree of inflammation is established, and the seemingly slight affair results in the loss of limb or life.

Symptoms.—Only a few will be mentioned, but I have observed the following train: atfirst the patient feels dull pains in the whole of the limb before any tumefaction appears; and, as this is a common way for rheumatism to exhibit itself, the pains are called rheumatic; and after the swelling comes on the patient remains deceived, for a rheumatic affection is often attended, or results in a tumified state of the parts implicated, and that disease not unfrequently fixes itself upon some of the larger articulations. Thus far then we could not well distinguish "white swelling" from rheumatism, especially as there is no perceptible change of color in the skin nor is there any increase of heat. In either disease the leg would be more or less bent, in order to relieve pain; the limb suffers emaciation; the muscles, tendons, and other soft parts, from remaining in a contracted state, become stiff; and false or more or less complete ankylosis takes place. Now the disease begins to differ from rheumatism. By careful examination the *bones* more than the surrounding tissues, will appear to be diseased. They are the parts which are tender, hot, and swollen, for the disease is advancing rapidly in the spongy, cancellated structure of the expanded extremities of the femur and tibia. When the joint is handled the feeling communicated is not that of fluctuation, but there is an elastic springiness in the swelling, and it will not pit like œdematous tissues. The aspect of the skin is pearly white, and not pinkish blue as in rheumatic and gouty swellings; nor has the tumefaction any enlargement of the superficial vessels like most inflammatory augmentation.

In process of time abscesses are developed in the cancellous structures of the bones, and the purulent matter, which may be creamy in consistence at first, but afterwards ichorous and mixed with curd-like and bloody flakes, bursts spontaneously, and discharges profusely through one or more fistulous openings. The disease extends its ravages to all the tissues of the joint,—the cartilages, synovial membranes, and ligaments melting in turn before the liquifying agencies now set up. During the entire course of the disease the vital efforts supply large quantities of plastic lymph, which serve to thicken the structures about the joint, the limb at the articulation increasing all the while in size notwithstanding the loss of the deep seated parts by suppuration. The continued nervous irritation and the exhausting drain of fluids establish hectic, which will often be accompanied by colliquative sweats and diarrhœa; and under the burden of all these prostrating influences no patient can long survive.

Pathological Appearances.—In dissections made by resection, or after amputation or death, a variety of morbid conditions may be observed, some of which are the following. The soft tissues exterior to the joint, and even the synovial membrane, will be found thickened and infiltrated with a gelatinous substance which has a pale yellow semi-transparent appearance. By means of the effusions, the several layers of areolar, tendonons, ligamentous, and synovial tissues become glued together, and so modified in character that they can scarcely be distinguished, the one from the other. The cartilages covering the articular surfaces of the bones may or may not be partially or totally destroyed by ulceration, and the bones be affected with caries. In a large proportion of cases some portion of the cartilages will be destroyed. It not unfrequently happens that depositions of new bony matter are found, showing that efforts at repair had been going on. But the spongy structures of the expanded extremities of the femur and tibia present very marked changes. The cancellous texture is filled with a lardaceous or cheesy substance which is not essentially different from tubercle deposited in the lungs or other parts of the body. In some instances cavities containing pus are discovered by cutting into the parts, and which have no communication with the openings that have formed by ulceration. The spongy osseous mass that withstands the destructive tendency of the disease, may be easily crushed with the fingers, and the thinned outer shell becomes quite brittle. The patella by no means escapes the ravages of this disease. So far as my observations have extended, this bone is quite as often affected as both of the others entering into the articulation.

Treatment.—Were I to insist upon a course of treatment as being certain of affecting a cure in a majority of cases, I should belie myself and prove false to a very honorable profession. As long as phthisis pulmonalis remains an incurable disease, so long will tubercular arthritis baffle the efforts of the physician. Not that " white-swelling" is as fatal or difficult to treat successfully as consumption, for the local manifestation is not on a vital organ. The diseased mass may be removed, leaving the system completely free of the disease. In a lung disease, the morbid mass cannot be thus removed.

From the cases that have come under my treatment and observation I am disposed to use some local applications in the earlier stages of the disease. Regarding intense pain as dangerous through nervous exhaustion, I usually apply anodynes to the knee. A solution of the cyanuret of potassium—two drachms to the pint of water—kept applied by means of cloths, has a happy effect; under its influence the inflammatory action is checked, and the process of swelling, and perhaps tuberculous infiltration, is arrested. In several instances I have been able to ascribe to it remedial powers that were desirable. During the treatment it is essential that the limb be kept as quiet as possible. Movements tend to keep up the irritation, yet plans should be devised to give the patient an airing. Well adjusted splints can be used to steady the joint while the patient is exercising on crutches. It avails little to treat a patient if he be kept in-doors all the time. Such a course destroys the digestive and assimilating powers of the body, and on that account confinement is badly borne by a class of patients, who need out-door exercise more than medicine, The splints should be such as to prevent the limb from becoming very much flexed. Slight flexion is desirable, as it relieves the tension of the tissues surrounding the articulation; besides, if ankylosis takes place, this position of the joint is more favorable to locomotion than a perfectly straight limb.

To apply poultices or warm fomentations while the disease is developing itself or during its earlier stages, would in most cases be a ruinous practice, as it would facilitate suppuration and ulcerative destruction of the joint. But in the second stage of the disease or after abscesses have formed, and their cavities are discharging through one or more openings, to foment the limb with hops or other anodyne herbs, or to use an alcohol vapor bath, will often act like a charm in allaying the pain.

During the early stages of the complaint, especially if the disease be of a tuberculous or scrofulous character as it usually is, it is well to administer internally, cod-liver oil, glycerine, or other like substances. The vegetable "*alteratives*" often exert a desirable remedial influence. The compound syrups of corydalis, and stillingia, of King's American Dispensatory, are among the best of that class of medicines. The stomach, however, is to be regarded;—to administer such medicines as render that organ unfit for digestion, would cut off the most direct means of constitutional recuperation. The patient should be nourished with unbolted bread, soups, palatable meats, and game. In some cases the bitter stimulating drinks, as ale and porter, are beneficial in connection with the diet.

In bad cases where the patient sinks from irritation, suppuration, sweats, and diarrhœa, and these symptoms are so obstinate as to baffle medication, it is time to think of amputation or resection, as a means of saving life.

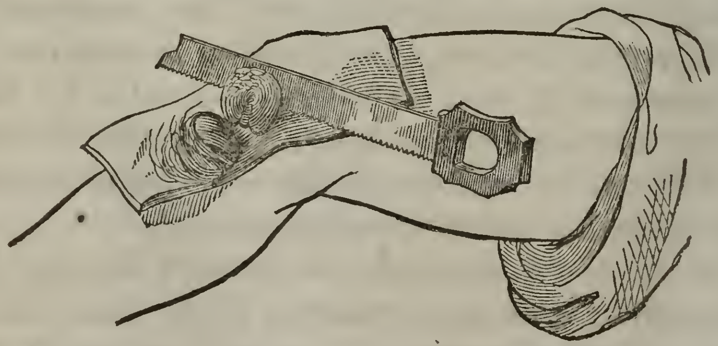
I have thus far neglected to speak of a very common practice in the treatment of chronic joint affections. I refer to irritation gotten up at a distance for the purpose of diverting the circulating and particularly the nerve forces, from the seat of the disease. The action induced by artificial means is called "counter irritation," and is commonly produced by the application of a hot iron—the *actual cautery*—to the skin in the vicinity of the diseased structures, establishing in time suppuration at a little distance from the joint. Setons, issues, and moxæ are used for a similar purpose. Any severe and lasting irritation excited in the tissues, bordering the diseased parts, will accomplish about as much as the *ferrum candens.* Irritating plasters containing solvents have been highly recommended as applications to be used around joints affected with "white swelling."

As announced above, amputation or resection is to be performed when there can be no hope that the disease will terminate favorably, or when death is sure to follow if the limb be let alone. The disease is sometimes invincible to other measures; and it is the surgeon's duty to save or prolong life even if the limb has to be sacrificed. Before a severe and dangerous operation is to be undertaken, the condition of the patient must be attentively examined, the resources of nature considered, and everything bearing upon the case maturely weighed.

Of the two operations proposed, resection which consists in cutting away or extirpating the carious extremities of the bones, and bringing the cut ends of the femur and tibia together in such a way as to secure a rapid and firm union between them, is less terrifying than amputation. Mr. Park, of Liverpool, England, has generally the credit of having conceived and executed the bold project of opening the knee-joint, and removing the diseased portions of bone entering into it. His first patient was a sailor thirty-three years of age; and so successful was the operation that as a seaman, he continued to follow his occupation until his death, which occurred by drowning, eight years afterwards. But really, Mr. Filkin, of Northwich, was the first to resect this articulation. According to a letter addressed to Mr. Park, by the latter's request, he performed the operation August 23rd, 1762. In three months the patient was well, requiring no farther attention. Mr. Filkin removed the patella, and extremities of the femur and tibia, all of which being diseased. Several surgeons followed Filkin and Park in performing this then novel operation and with very flattering results. But Mr. Syme, not meeting with the succcess of his predecessors, "attempted to consign the operation to unmerited oblivion;" though he subsequently said, influenced somewhat by the favorable practice of the advocates of the operation, "on the whole, I am not inclined to condemn the excision of the knee-joint altogether, and at the same time, cannot venture to recommend it."

Mr. R. G. D. Butcher, surgeon to Mercer's Hospital, Dublin, has written an excellent memoir on resection of the knee-joint. He furnishes a good collection of cases, and a careful analysis of their results; and from his experience, and success, none can vie with him in point of authority on this subject. Mr. Butcher reports eighty-two cases that have been subjected to resection at the knee. Of these "fifteen died—three from phlebitis and pyæmia; two from dysentery and diarrhœa; two from phthisis and organic disease; six more immediately from the operation; and two sank at a longer interval." Two of the cases suffered from severe hemorrhage; one of which died in consequence on the fourth day, and the other underwent amputation, and died on the fifth day after the second operation. From the whole number of cases reported by all authors it is quite certain that amputation of the thigh is as fatal, if not absolutely more so, than resection of the knee. Patients get up more slowly from resection than amputation, but the length of time an amputated stump remains tender and unfit for an artificial limb, is an offset to the protracted recovery of resected cases. In these days of "finished workmanship" in the manufacture of artificial limbs, it may be inquired which is preferable, a real leg, shortened two or three inches, and stiff at the knee, or an artificial substitute after amputation of the thigh. I think no one will hesitate to pronounce a real leg, impaired only by ankylosis at the knee, (for the shortening in such a leg if slight, will be advantageons than otherwise, as the outward swinging motion in progression, can be avoided.) more desirable than *any* piece of artificial mechanism. Persons who have undergone resection, are generally able to walk with great ease, and without becoming much more weary than with two perfect legs. The greatest misfortune is in the appearance of the gait. It is well known, too, that the best of artificial limbs extending upon a stump of the thigh, cannot be worn without some injury to the appearance of the gait; and such limbs always produce excoriations when used in walking any considerable distance, and cause great fatigue.

To perform the operation of resection, the patient, under the influence of anæsthesia may be placed upon a lounge or operating table, and



This diagram illustrates the knee-joint undergoing resection. The operation is described in the text.—[Original.]

the necessary instruments being at hand, a straight incision four inches in length is to be made on either side of the joint opposite the lateral ligaments, and these two are to be met in their middle by a transverse cut, extending across the patella, forming an H-shaped division of the tissues. The flaps are then dissected and turned up and down, exposing the bone. The patella had better be removed altogether, whether, it be diseased or not; forcible flexion is then used and the lateral ligaments divided; the posterior part of the femur is carefully freed from its connections with the popliteal tissues, and with an ordinary saw the greater part of the condyles is to be removed. The articular surface of the tibia is next to be sawn away; the resected ends of the two bones brought together by extending the leg; and, the soft parts being secured in place by sutures, adhesive strips, and other appropriate dressings, the limb lastly to be placed in a woven wire splint similar to the one figured in a previous number of this Journal, in an article on "Fractures about the knee." The process of cure is not different from that which takes place after the ends of a broken bone are cut away in the treatment of false-joint following a fracture. All the synovial membrane is removed, also the articular cartilages whether diseased or not, as the presence of the former tends to prolong the subsequent suppuration and retard the healing process; and the latter, if present, obviate bony ankylosis. Mr. Hutchinson advises, before the wound be closed, to cut the hamstring tendons that they may not by their unopposed contraction, unduly flex the leg on the thigh, and displace the tibia. The suggestion is a rational one, and Mr. Holt has found it serviceable in practice. The long splint of Liston usually recommended in the after treatment, is burdensome. The woven wire splint, allows a free escape of pus and other fluids, is every way comfortable, and if it extend to a considerable distance above and below the joint, will hold the limb steady. During the entire period of the after treatment, the strictest personal attention is demanded on the part of the surgeon. At times one course of treatment will be required, then a change of the condition of the patient will demand another. As a general thing the tendency to exhaustion is more particularly to be guarded against, therefore stimulants, tonics and nutritious diet will constitute important parts of the remedial course.

In some cases after comminuted fractures of the articulations, in which there are loose fragments of bone that must find escape, it may be sufficient to make free incisions into the parts, and through them remove what would otherwise be the cause of protracted disease. By such treatment resection may sometimes be avoided.

EDITORIAL DEPARTMENT.

THE COLLEGE JOURNAL OF MEDICAL SCIENCE.

Three years since the College Journal was "established to aid in the advancement of Liberal Medicine," and has been steadily presenting its monthly issues, since then, for the approval of the profession.

Three volumes are completed with this number, and the large and steadily increasing list of its subscribers, together with the unprecedented number and only laudatory character of the notices given it by the conductors of the public press, proves the course pursued by its managers to have been satisfactory.

Last year we had a larger and better list of Contributors than it had before been the fortune of any medical periodical in the country to obtain in so short a period of time; and during the present year we are pleased to know the number has not decreased, while the character of their contributions will bear favorable comparison with those of any similar publication; and the variety of practical subjects considered and discussed, as shown by the Index, is entirely beyond comparison with any other medical monthly published in the country.

When it is considered that we have taken *nothing* from other Journals—that the matter in the College Journal is *entirely original* in form; that hundreds of long articles, occupying thousands of pages, have been carefully read and abstracts made therefrom, thus giving the results arrived at, and their utility, with the use of slight space; and that the pages of the Journal have been illustrated by *thirty-eight* wood-cuts, we feel assured that we have fairly earned the patronage which has been bestowed upon our efforts, and the many words of congratulation and laudation which have cheered and lightened our labors.

We do not refer to these matters simply with an idea of calling attention to the past, but rather as an indication of what our readers may expect in the future. We *have* furnished our subscribers with *the cheapest medical Journal published in the world*, affording the most reading and on better paper than can be had at the price elsewhere. And we have been so well pleased with our success, that we propose to continue our efforts with only those changes which our increased facilities and enlarged experience have placed at our command.

We shall still issue the College Journal of forty-eight large octavo pages on the first of each month, at *One Dollar a year to those who pay in advance*, and shall do all in our power to make it *the best* Medical Magazine of this or any other country.

As heretofore, all communications should be addressed to the Publisher who will supply missing numbers, or specimen numbers gratuitously, on application, and will attend to all matters connected with its publication.

MEDICAL PERIODICALS.

In answer to inquiries which we have received, and in prospect of the near approach of the commencement of the year, we will name a few of the leading Periodicals of the country, that our readers may select such as will suit them.

No fear need be entertained that the value of the monthly visits of the College Journal will be lessened, as our Journal will never depend upon others for the articles it contains.

The Boston Medical and Surgical Journal, is a Weekly Octavo, containing *twenty* pages a week of reading matter, at $3.00 a year in advance; after three months, $3.50; at the end of the year, $4.00. It is in its *fifty-ninth* volume, and is well conducted, quite interesting, and more conservative than when edited by Dr. J. V. C. Smith.

Braithwaite's Retrospect of Practical Medicine and Surgery is a Half-Yearly of about 350 pages to a number. It is republished by William A. Townsend of New York, at $2.00 a year. It has now been published nearly twenty years and each year has added to its reputation and value. Many Journals depend upon it for their most valuable articles.

The British and Foreign Medico-Chirurgical Review, a Quarterly of 216 pages, is republished by S. S. & W. Wood of New York, at $3.00 a year. It is devoted mainly to a review of new medical books and often contains nearly all of value in the works noticed; but it also contains many other articles of great value. It is the leading Medical Review in the world.

The London Lancet, a Monthly of eighty-eight large pages, is republished in New York, by Dexter and Brother, at $5.00, a year. Many of the best Lectures delivered in London are published in the Lancet

The Half-Yearly Abstract of Medical Science, is in character somewhat similar to Braithwaite's Retrospect. It is of about the same size and price ($2.00 a year), and republised by Lindsay and Blakiston at Philadelphia. It has not been published quite as long as Braithwaite's Retrospect, but is fully equal to it.

The American Journal of Medical Science, a Quarterly at $5.00 a year, has for many years been published at Philadelphia. The most of the heavy articles contributed by American writers first appear in this quarterly.

The North American Medico-Chirurgical Review, a Bi-Monthly of 192 pages, published at Philadelphia, at $5.00 a year, has just completed its second volume. It contains some valuable papers from its contributors, especially on Materia Medica and Therapeutics.

The American Journal of Pharmacy, a Bi-Monthly, also Published at Philadelphia, at $300 a year, is a valuable work.

The Charleston Medical Journal and Review, published at Charleston, S. C., once in two months, at $4.00 a year, is a very valuable publication.

The American Journal of Insanity, a Quarterly published at Utica New York, a work of 124 pages a number, at $2.50 a year in advance, or at $3.00 if paid at the end of the year; is a work of great interest and value.

In addition to these, there are over forty Bi-Monthly and Monthly Medical periodicals published in different sections of the country, and although they differ much in character, utility, and price, as well as size, it is hardly possible that any practitioner can read either of them without receiving many times over the value of the two or more dollars which they cost.

BOOK NOTICES.

Lectures on the Principles and Practice of Physic; delivered at King's College, London. By Thomas Watson, M. D. etc., A new American, from the latest Revised and Enlarged English Edition, With Additions by D. Francis Condie, M. D., etc. With one hundred and eighty-five illustrations on wood. Philadelphia; Blanchard & Lea, 1858.

For fifteen years this volume of lectures has been in the hands of the profession in Great Britain and in this country, and the opinion first formed of it, and which led to the sale of an entire edition in less than twelve months, has never been changed. In 1845, the American editor made such additions to the reprint as seemed necessary to make it a safe guide to the practitioner, and after two years, when a new edition was called for, he corrected a few errors which had formerly escaped his attention.

Last year, the author found time to make a thorough revision of his book, incorporating in the text whatever of new and valuable matter the progress of medical science during twelve years had brought to his notice, extending the Lectures on Fever, and carefully noting the positive distinctions which have been strongly insisted upon by the most eminent pathologists, between Typhus, and that which has unfortunately been called *Typhoid* fever. He says:

"For a long time I held, in common I believe with most English physicians, that no definite line of genuine distinction could be drawn between the various forms of continued fever met with in this country. * * * * But I think so no longer. The Dr. Jenner of our time, with patience and sagacity worthy of the great name he bears has traced out *plain lines of deviation* between two or three forms of continued fever, and especially between two forms which had been chiefly confounded together, and which we now call respectively *typhus* and *typhoid* fever. In the affinity of these names is still implied the similarity of the two disorders; but Dr. Jenner has shown by evidence which quite satisfies my mind, that they differ *notably* and *constantly* in their symptoms and course, in their duration, in their conformative fatality, in the superficial markings which respectively belong to them, and which warrant our classing them among the *exanthemata*, in the internal organic changes with which they are severally attended, and (what is the most important, the most conclusive, and the most difficult point to determine of all) in their exciting causes. * * * For my own part, I could have wished that typhoid fever had been named, as Dr. William Budd named it, *Intestinal* fever."

Besides the increased consideration which has been given to the subject of Fever, many other additions have been made, increasing the size of the book some two hundred pages. It is also well illustrated with very fair wood-cuts.

As now presented, it is one of the most satisfactory works on the Practice of Medicine in the English language, containing however, some doctrines to which we cannot subscribe, and recommending the use of some remedies and modes of treatment we do not approve.

We also object to the form of Lectures in the consideration of scientific matters. We doubt not, the teachings presented in the form of oral lectures, could be presented to the printer in this way with less labor to the author than in a more scientific form, but the interests and welfare of the many should not be sacrificed for the convenience of one person.

Brief Expositions of Rational Medicine: To which is prefixed The Paradise of Doctors. A Fable, by JACOB BIGLOW, M. D., etc. Boston: Philips, Sampson and Company, 1858.

THIS is a very pleasant and well-written production of one who has done much for the profession, and is now endeavoring "to cleanse the profession from the fanaticism of *heroic* doctors on the one hand, and moon-struck doctors on the other, and to replace these forms of delusion by a discriminating, sincere, intelligent and *rational*, course of treatment."

As an appeal to the *people* as well as the profession, it is very timely and must prove efficient.

An Essay on the Pathology and Therapeutics of Scarlet Fever. By CASPER MORRIS, M. D., etc. Philadelphia: Lindsay & Blakistone, 1858.

THE subject of Scarlet Fever has for years been one of deep interest to the profession, and one so fatal, and so wide-spread in its devastations among those of tender years, that, although much has been written upon it, and its pathology and therapeutics so fully examined, but little of a new or interesting character can be supposed remained to be considered.

But of late a decided change has occurred in the opinions of many observers, and their more recent opinions coincide so nearly with our own, that we feel it our duty to present a few of the more important ones to the readers of the COLLEGE JOURNAL.

In regard to *the period of incubation*, the author says: "Forty-eight hours, is the shortest interval between exposure and sickness. The longest I have known was twenty-eight days." "With pregnant or puerperal women, it is almost inevitably fatal." Respecting the affection of the kidneys in this disease, the author quotes Dr. Graves of Dublin, as expressing an opinion, which he also endorsed, "that the kidneys partake of the diseased action in scarlet fever from the beginning of the attack." The opinions of MM. Rilliet and Barthey that; "There is an inflammation of the subcutaneous lymphatic layer in all cases of scarlet fever, and that the dropsy and albuminuria are dependent on a special alteration of the blood, resulting from this," is endorsed.

Again and again, in different terms, we are told that "scarlet fever has a specific origin, a fixed course, and a certain termination," that its "duration is fixed and may not be curtailed," and that this fact should never be lost sight of in the treatment of this and other named diseases, "and he who attempts to cut short the fever will find it can be done only at the expense of the life of the subject." "The preternatural treatment is more to be dreaded than the morbid impressions of the disease itself."

In the management of cases of simple scarlet fever, the author says:

"Tepid sponging may always be employed with benefit where the skin is hot and dry, the pulse quick and strong, and the patient restless."

In regard to *bleeding*, the use of *calomel* or of *antimony*, the author is emphatically plain. Of bleeding, he says: "Bleeding, whether local or general, is in these cases very often followed by fatal results." "In almost every instance in which I have resorted to depletion, either local or general, in cases of scarlet fever, no matter how vigorous the patient, or violent the symptoms, the case has had a fatal terminiation." "I have never seen *any* good result from it; and I have too frequently had occasion to mourn over its fatal influence." Even the local abstraction of blood from the neck, "cannot be too strongly condemned." "I have never known a patient to recover from the anginose form of scarlet fever when I employed the lancet." And the topical abstraction of blood by cups or leeches, "I think, open to still greater reprehension than the other mode," because of the liability to ulceration from the bites of the leeches and gashes of the scarificator.

Inunction is referred to, but not with the confidence of a German writer, Hodge, and others of this country.

Emetics may be resorted to, only, however, to remove any undigested food which is in the stomach, and of course *only at the onset* of the disease. Ipecacuanha is preferred to all other agents, but alum, and sulphate of zinc may be used, but *never* "tartarized antimony and potassa. Antimonial emetics are wholly unsuited."

"Purging, beyond the mere evacuation of the bowels, is positively injurious." Calomel in this disease is "so deleterious" that the author would withold it, even from a doubt of the nature of the case on account of the "depressing influence it exerts in its primary impression."

A recent author, Dr. Hood, of London, has claimed that *quinia* is as sure a specific in scarlet fever, as in diseases of miasmatic origin.

Chlorate of Potassa, the acetate of ammonia, an infusion of cinchonia and capsicum with the carbonate of soda, or serpentaria at times, are spoken of as very useful. In those cases where the skin is hot and dry and yet devoid of eruption, and where there is great restlessness, capsicum has appeared to confer benefits which almost entitle it to the character of a specific, and it should never be omitted.

In regard to the claims which have been urged for the prophylactic powers of *belladonna*, the author considers them "absolutely baseless." Many evidences are cited in support of this opinion, and among them is the fact, that his son, Dr. J. C. Morris, having charge of an asylum for children, tried it with forty-three, of which number twenty-four took no belladonna, and eighteen had the disease, and of the nineteen who took belladonna, eleven had scarlet fever. Lehmann, a German physician gave it to three children and two had it. Dr. West of London had one hundred and fifty-one boys under notice and he gave belladonna to seventy-five and witheld it from seventy-five. Two of each class had the disease. Dr. Coeden, of Philadelphia, who has tried it repeatedly, never *knew it to produce the slightest effect in mitigating* the character or preventing the occurrence of scarlet fever. Dr. Tanner says: "It has now been used by many practitioners, and found useless."

But, instead of indicating the opinions of the author, we can do better by advising our readers to *buy the book.* There are some ideas in it we cannot endorse. The style is, perhaps, not without fault. There are too few paragraphs to suit our taste, and the eye and attention of the reader are not relieved by chapters, sections, nor even those *side heads*, which act as objects of interest, and lure to pause and reflection.

The author takes us through a monotonous and nearly level country with little variation in the scenery; but he beguiles the journey with his own interesting and instructive observations, and, as the journey is not long, we almost forget these necessary, if not important points in the arts of author-craft.

Lectures on the Sulphate of Quinia, delivered in the regular course of the medical department of the University of Michigan. By A. B. PALMER, A. M., M. D., Prof. Materia Medica, Therapeutics, and Diseases of Women and Children. Published by the Class. Detroit, 1858.

IF more of the Medical Students in different Colleges would insist upon publishing some of the Lectures of their Professors, we might be blessed with more valuable monographs like the present, and perhaps with a less number of drones in the professors' chairs, for some would sooner resign than have themselves appear *in print* before the profession and public.

A Manual of the Practice of Medicine. By T. H. Tarner, M. D., etc., etc. First American from the third Revised and Improved London Edition. Philadelphia: Lindsay and Blackiston, 1858.

In the College Journal for Feb. 1856, we had occasion to say in regard to *Tarner's Manual of Clinical Medicine*, that we were "satisfied it is one of the most valuable works of modern issue." Of the present volume, we have to say, that it is a fit companion to the former work.

Neither of these books can claim to range above that of a small manual, and are not designed to supply the need of more elaborate treatises; but as a miniature painting can give all the lines, the varying tints of light and shade, and be as perfect of its kind, as one of full life size, so can a book, give in *miniature* the features of a disease recognizable and clear.

The *Theory* of the author, is in most cases clear and apparently well sustained by observation. His *Practice*, we think, by substitution, could in some instances be improved.

The Relation of the Physician to the Public. An Address delivered at the Semi-Annual Meeting of the East Tennessee Medical Society, April 6th, 1858, by William R. Findley, M. D. Published by order of the Society.

This is an attempt to place the relations of the profession to the public, on a better foundation than at present exists; but like most similar efforts, will fail of accomplishing much, and mainly from a want of a correct diagnosis of the difficulties the profession is laboring under. The fact that the remedies proposed are quite inadequate to remove the difficulty, naturally follows the error first mentioned.

Physicians should be *men*, and convince the public that they are governed by the same motives which control the "rest of mankind," cease to be a *close corporation*, and encourage the spread of *human* knowledge, and then they will be recognized and treated as members of the human brotherhood.

Special Exercises in the Treatment of Diseases of the Lungs. By Henry Davis, M. D. (From the American Medical Monthly, March, 1858.)

In the year 1856, Dr. Davis published a series of papers upon "Deformities and their *Remedies*," and the use of Exercise in overcoming deformities, led him incidentally to notice their value in developing the thorax, and consequently the lungs, as well as to counteract the tendency to, and to cure phthisis. But for these later purposes it was found necessary to "adopt some mode in which the muscles will be called upon to contract in the same direction as in the act of inflating the lungs by a voluntary effort."

This mode consists in making *the hands* the fixed point, and moving the bones and muscles of the thorax. In the use of dumb-bells and most other appliances in common use, the hands are movable, and chest being the fixed point, the pectoral and other respiratory muscles are contracted during the effort, and the capacity of the chest is diminished, and consequently respiration is interfered with, the amount of air inhaled lessened, the rapidity of the heart's action increased, and a sense of fatigue quickly supervenes, while the dilitation or development of the air cells of the lungs has *not* been accomplished.

When a patient has an attack of the *asthma* he instinctively leans forward, with his hands before his face, his elbows thrown outward and upward, and his thorax supported by the pectoral muscles, and his head resting upon his hands or wrists. In this position his breathing is so easy that he may sleep although that blessing may be denied him for days while he assumes any other attitude. From this fact, a very practical inference can be drawn.

The value of *special exercise* in the treatment of many forms of local disease is beginning to be appreciated, but some heretofore have relied on them too exclusively, and Dr. Davis has properly spoken of it as "a remedial measure *over and above* other treatment."

A System of Human Anatomy, General and Special. By Erasmus Wilson, F. R. S., Edited by William H Gobrecht, M. D., Professor of Anatomy in the Philadelphia College of Medicine, etc., etc. Philadelphia : Blanchard & Lea, 1858.

The seventh edition of this truly valuable work came to us enlarged and improved. It needs no commendation, as the necessity for a sixth revision affords ample proof that its merits are known and appreciated by the members of the medical profession. It is indeed *the best* work on anatomy in existence, and no physician's library can be complete without it. Very valuable additions have been made to the Histological portion of the work as it appeared in the sixth edition, and the number of cuts have been much increased. For brevity and completness of description, Wilson's Anatomy stands unrivalled. We use it in our Dissecting Rooms, and recommend it to all who have an inclination to obtain a knowledge of Anatomy.

The mechanical appearance of the book is such as might be expected of the house from which it emenates, and does credit to their already established reputation.

Domestic Animals ; a Pocket Manual of Cattle, Horse, and Sheep Husbandry ; embracing Directions for the Breeding, Rearing, and General Management of all Domestic Animals ; Rules for the Improvement of Breeds ; How to insure the health of animals ; and how to cure their diseases without the use of drugs ; with a chapter on Bee-Keeping. By the author of "The Garden," "The Farm," etc. New York : Fowler and Wells, 1858.

This is one of the many small but valuable books which the general demand for practical information, has recently brought forth. As an introduction to more elaborate and satisfactory works it has its value ; but we are fully assured these superficial *manuals* must soon give place to works of a higher order.

Electrical Anæsthesia, comprising a brief history of its Discovery, a Synopsis of Experiments, also full directions for its application in Surgical and Dental operations, by W. G. Oliver. Buffalo, 1858.

This little volume explains the mode adopted by the author in extracting teeth, and allowing some surgical operations to be performed while the parts acted upon were under the influence of electricity. As a matter of *history* this contribution has some value. As a matter of science, it is not satisfactory.

PERIODICALS.

Braithwaite's Retrospect of Practical Medicine and Surgery, has been published for more than eighteen years ; and consequently there are but few physicians in this country who have not seen it. It is a publication no practicing physician can afford to deprive himself of, and the yearly volume is a very valuable addition to any medical library.

The Scalpel comes with far more regularity than some periodicals which profess unusual staidness. It must be read and re-read to have all its points appreciated.

The American Journal of Insanity, always valuable, is more than usually interesting.

The American Veterinary Journal, the only one of the kind in America, is conducted with its usual ability.

MISCELLANY.

TILDEN & CO'S PREPARATIONS.

Some time since we were favored with a lot of medicinal preparations, consisting of Sugar Coated Pills of various kinds, and twenty-eight powdered or crystalized medicines popularly known as the *Concentrated* preparations.

The Sugar Coated preparations *look* very nicely and the coating with sugar is admirably done, and is very convenient in enabling patients to take disagreeable medicines without the nausea and disgust that accompany the ordinary methods of administration, and which, aside from the distress they cause, must materially interfere with their therapeutic value. But manufacturers of these sugar-coated preparations will need to exercise extreme caution in the selection of materials and in their manufacture, as the profession are becoming properly jealous of risking the lives of their patients and their own reputation, on the use of agents whose character is not easily determined.

Of the so-called *Concentrated* agents, we choose at present, to speak only in general terms. The profession have been deceived in those presented under similar names and in a similar form, by an irresponsible firm in the City of New York, and until these preparations are submitted to repeated chemical analyses they will be received with some doubt, perhaps with more than they deserve. We have repeatedly mentioned the manufacturers of these articles, as persons who by their honorable and gentlemanly conduct have won the confidence of the profession, and these remarks refer to the class of agents manufactured, and not to the house who prepare them.

The Apocynin and Asclepin are reduced to powder by the use of sugar of milk: So also Chelonin, Cyprepedin, Hydrastin, Hyoasciamin, Lobelin, Lupulin, Populin, Scutellarin, Senecin, Stillingin, Trillin, and Xanthoxylin. The Caulophylin and Cimicifugin have something of the taste of the roots from which they are prepared, but evidently *do not* contain the most valuable medicinal portion. So of the Eupatorin; the part soluble in water is of more value than the insoluble portions. The Geranin, like that manufactured in Cincinnati, appears to be worthless as a medicine. It should be prepared according to the method directed in the United States Dispensatory for preparing tannic acid from nutgalls. The preparation labeled Hydrastina, appears to be pure hydrastinic acid. The preparation miscalled *Irisin* on the large label but "Iridin" on the smaller label may be good, but if so, it should not be mis-named from other preparations known to be unsatisfactory and sophisticated. The Jalapin is probably the ordinary resin of jalap. Of the Juglandin we know nothing. It is now fully proved that Leptandrine is nearly or quite inert, and the powder presented by Tilden and Co., resembles in appearance that which formerly was manufactured in this place. *Now*, it is admitted that the medicinal principle of Leptandria is not a *resinoid*, and a new method of manufacture is being employed, and a product *not* Leptandrin is obtained, but which is still sold under that name. Either the *dose* named is too large, or the Podophylin is not strong. It looks well. The Prunin is probably of little value, being deprived of the volatile principle which renders the fresh bark valuable as a medicine. The Sanguinarina and Sanguinarin cannot be as potent as the true preparation is, or the doses named are exceedingly dangerous.

We will gladly aid in dissemination of good, reliable, and convenient agents; and should any of the preparations prove as valuable as the reputation of their manufacturer's warrant us to expect, we will welcome them with the warmest feelings and the most hearty good wishes.

TREATMENT OF YELLOW FEVER WITH VERATRUM AND GELSEMINUM.

In the November No. of the *Charleston Med. Jour. and Rev.* is a report of the use of above named arterial sedatives in the treatment of yellow fever, by Drs. White and Ford of Charleston, S. C. In the commencement of their report they allude to the *especial fatality of the disease during this season*, and to "the cause of distrust in received modes of practice." From the remedies that lower the heart's action they selected at first Veratrum Viride "on account of its remarkable certainty, promptness, and freedom from injurious qualities." The first doses were often vomited, but succeeding ones were generally retained, unless the drug was given in too large quantities. "The reduction of the pulse was accompanied by a notable cooling of the body, by a well marked diminution of the headache, pain in the back and limbs, of the restlessness and anxiety, of the frequency of respiration, of the congestion of the skin, flushing of the face, tumefaction of the tongue, and injection of the conjunctiva. The patient felt much relieved and slept tranquilly as soon as the vomiting had ceased; nor did the symptoms tend to recur for some hours, as they would always do, however, if the drug were not again prescribed." Pregnant women affected with the fever and tending to abort were prevented from miscarrying by taking veratrum.

Convalescence was almost invariably prompt and uncomplicated. Relapses occurred in but two cases, in both of which quinia had been omitted during convalescence. The average beat of the pulse in adults at the time the veratrum was first given, was about 108 to the minute, and at the expiration of seven hours afterwards, it was reduced to an average of 63 to the minute. The whole number of cases treated with Veratrum Viride was 117, of which 102 recovered and 15 died. The mean duration of treatment was six days.

In order to contrast the veratrum treatment with that of another remedy possessing "similar powers," Dr. White suggested, in consequence of the statements of Dr. Cleaveland, of Cincinnati, and Dr. Mayes, of South Carolina, the use of gelseminum. The remedy was given in ordinary doses, which reduced the pulse as markedly, though not so quickly, as veratrum. The gastric irritability peculiar to yellow fever seemed to be favorably influenced, and the nervous system generally was calmed by the medicine. There were only twenty-four cases treated with gelseminum, but all recovered. Of these seven passed black vomit by emesis or catharsis.

Of the cases treated in the "ordinary" way, were six; three recovered, and three died.

In conclusion Drs. White and Ford, "beg leave to remark, that the confidence with which we were inspired by the use of these drugs in the commencement of the epidemic has continued unabated; that we still continue to use them, and intend to do so again, should our city be unfortunately revisited by this obdurate and calamitous disease."

MALIGNANT TUMOR OF THE LOWER JAW.

In November, 1857 Dr. S. F. Compton of Hilsboro, Ohio, had his attention called to an enlargement of the lower jaw, about mid-way between the symphisis mentis and the angle of the bone. The enlargement was caused by a tumor at that time about the size of an almond. The teeth in that region had been removed some years previously, but no appearance of any disease had been observed until a short time before.

The tumor was hard, except at the base of it under the tongue it was elastic as if it contained air. An exploring needle was passed into it to the depth of an inch without causing any discharge,.even of blood. It was not tender or painful, except occasionally not very severe, lancing momentary pains would occur.

In January 1858, the tumor continuing to increase in size, its removal was decided upon and it was destroyed as well as it could be without injuring the cheek. The cautery was used freely.

In a few weeks the malignant character of the disease was manifested, and it could not be entirely destroyed without the removal of a part of the jaw.

About the 20th of May, Dr. Wise was called to see it, who took the then dimensions of the tumor, and advised a delay of one month, and then to have the tumor removed if it continued to enlarge. In June it was found that the tumor had increased one fourth in size in thirty days, and then measured from the right cuspid tooth back about one and a half inches, and was about an inch wide.

Chloroform was administered and Dr. Wise removed the tumor by making an incision from near the symphisis in a line with the lower edge of the Jaw, back to the angle, and dissecting up the cheek until the jaw and the tumor were exposed, when Dr. Crompton cut the jaw in two as the base of the cuspid tooth with a saw which he had made out of a watch spring, and which answered its purpose well.

Dr. Wise then continued his dissections, pulling the jaw forward and cutting close to the bone and tumor until the sound jaw was exposed beyond the tumor, when the saw was applied and the jaw again severed and the tumor completely removed.

The loss of blood was small, and the wound closed by interrupted sutures and strips of adhesive plaster, over which oiled silk was applied,

Ffg. 1.

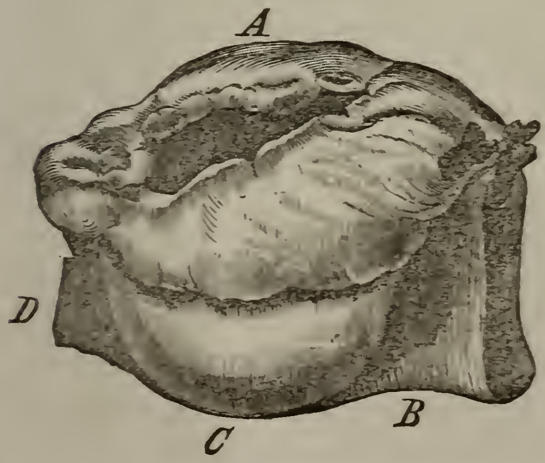
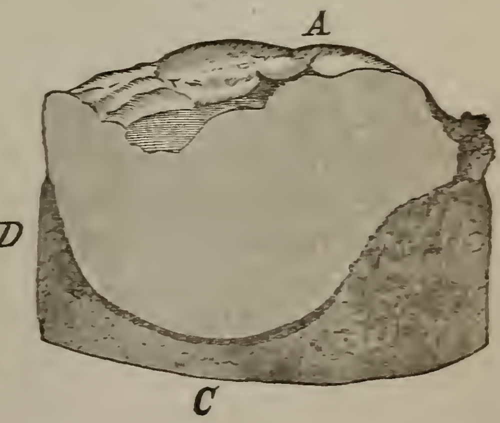


Fig. 2.



and outside a bladder constantly kept in which was pounded ice. Notwithstanding the extreme heat of the weather, the ice prevented inflammation, and the wound healed almost completely by immediate union.

Fig. 1 represents the tumor and the excised portion of the jaw.

A, is the upper portion of tumor, B, the posterior, and D, the anterior portion of the jaw. C, is the base of the jaw.

Fig. 2, represents the tumor cut longitudinally. The encroachment of the tumor on the bone of the jaw is well shown. The case was reported in the Dental Register of the West, for September.

RECIPROCAL SYMPATHIES OF THE ORGANS OF THE PELVIS.

There are frequently great mistakes made in forming a diagnosis of diseases of the genito-recto-urinary organs, on account of a reciprocal sympathy existing between the structures constituting the pelvic viscera proper. A man with a fistula or other difficulty about the anus, may be troubled with pains in the penis, testes, pubes, perinæum, bladder, and kidneys; and suffer with symptoms that would lead a practitioner to suspect urinary calculi. Ascarides in the rectum may excite a train of symptoms seemingly the result of some vesical malady. Morbid actions in the uterus, whether benign or otherwise, often have the earliest announcement of their invasion in symptoms of disturbance first noticed in the functions of the bladder. A female will often consult her medical adviser concerning a renal or vesical derangement when the womb is the seat of the morbid action. Dr. Bradway, of Canada, was recently consulted by a lady who had suffered for months with intense pain in the region of the kidneys and bladder, and scalding of urine, with frequent micturation, and had been treated by several physicians for a urinary difficulty when the whole trouble was caused by a small warty excrescence growing upon the labia minora, which being removed the urinary irritation promptly subsided. To treat the symptoms regardless of the cause, in cases of this kind, leads to failures as marked as though an attempt were made to cure itching of the nose which accompanies the presence of intestinal worms, by using errhines or applications to the schneiderian membrane.

After purturition, it frequently happens that the patient is unable to void the urine voluntarily, or it will dribble as if a vesical fistula had been produced, while careful attention to the condition of the parts would reveal nothing extraordinary in the case. The excitement the uterus has been under, is followed by depression amounting almost to paralysis, which is participated in by the neighboring organs.

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